

January 22, 2013



Mr. Dave Graham  
City of Chicago  
Department of Fleet and Facility Management (2FM)  
Bureau of Environmental Health & Safety Management (EHS)  
Urban Management and Brownfields Redevelopment Division  
30 North LaSalle Street, Suite 200  
Chicago, Illinois 60602

RE: Preliminary Report  
Phase II Site Investigation Summary  
Proposed Kimball Park (Parcels 13-35-409-037; -039; and, -042)  
1809 North Kimball Avenue  
Chicago, Cook County, Illinois  
City of Chicago Department of Environment Brownfield Assessments Project  
Hazardous Substances Assessments  
USEPA Cooperative Agreement No.: BF-00E683-01  
Terracon Project No.: A2107017 Task 7A

Dear Mr. Graham:

Terracon Consultants, Inc. (Terracon) is pleased to submit this Preliminary Phase II Site Investigation Summary for the above-referenced site. Prior to the investigation, Terracon submitted a Property-Specific Sampling and Analysis Plan (SAP) which was approved by the US Environmental Protection Agency (USEPA) on August 20, 2012. The SAP was developed consistent with the Quality Assurance Project Plan, Revision 1 (QAPP), dated September 16, 2011. The QAPP was approved by the USEPA in December 2011.

## BACKGROUND

The site is located at 1809 North Kimball Avenue in Chicago, Cook County, Illinois and is associated with Property Identification Numbers (PINs) 13-35-409-037; -039; and -042. The site location is depicted on Exhibit 1 – Topographic Vicinity Map included in Appendix A. The approximate 0.41-acre site is irregularly shaped and is currently vacant. There is remnant concrete surface cover on portions of the site and the remainder is grass or bare soil. An earthen ramp with a concrete retaining wall is located in the southwestern quadrant of the site. The ramp leads to an elevated rail line (approximately 15-20 feet above the site grade) which borders the site to the south.



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The site is located in a mixed residential/commercial/industrial area of Chicago. The site is bordered on the north by single-family residential homes; on the south by a tract of land owned by Soo Line (railroad); on the east by a condominium complex (G&A Residences); and on the west by North Kimball Avenue followed by a multi-family residential development (Humboldt Ridge). These surrounding land uses are shown on Exhibit 2 – Site Diagram of Appendix A.

Based on information presented in a Phase I ESA prepared by Terracon dated August 21, 2012, and in a Comprehensive Site Investigation Report (CSIR) prepared for the site by Weston Solutions, Inc. (Weston) dated July 2012, the site history is summarized below.

- 1896: Site occupied by a single-family dwelling on northern portion of property and used for lumber storage for Elsmere Lumber Company (ELC; south adjoining property) on eastern and southern portion of property
- 1921: Site appears vacant with no structures;
- 1950: Site occupied by a warehouse believed to be an extension of the American Laundry Machinery Company (ALMC; east adjoining property). The warehouse included a structure for painting operations and/or paint storage;
- 1975, 1988, 1991, and 1994: Site occupied by a warehouse believed to be an extension of the former ALMC, the Compco Corporation (Compco), a fluorescent light bulb and fixture manufacturer; and,
- 2002 and 2004: Site appears vacant with no structures.

The site was formerly a part of industrial and manufacturing operations that occurred on the adjoining east and south properties. The property to the west (across North Kimball Avenue) was historically industrial until recent redevelopment as a multi-family apartment complex. Properties to the north have historically been single-family residential.

According to the Weston CSIR, the horizontal extent of constituents of concern (COCs) at concentrations exceeding the Illinois Environmental Protection Agency's (IEPA's) Tiered Approach to Corrective Action Objectives (TACO) regulations (35 Illinois Administrative Code [IAC] Part 742) Tier 1 Soil Remediation Objectives (SROs) has been established by the property boundaries in all directions; however, the vertical extent of contamination is not defined at the following sampling locations for the listed COCs:

- B-2/KP-SB01 – trichloroethene at 18 to 20 feet below ground surface (bgs);
- B-3/KP-SB09 – trichloroethene at 6 to 9 feet bgs;
- B-4 – cis-1,2-dichloroethene and vinyl chloride at 9 to 12 feet bgs;

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- B-5/KP-SB02 – cis-1,2-dichloroethene, trichloroethene, and vinyl chloride at 18 to 20 feet bgs;
- B-8/KP-SB10 – benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene at 12 to 14 feet bgs;
- KP-SB04 – trichloroethene and vinyl chloride at 14 to 16 feet bgs;
- KP-SB05 – trichloroethene and vinyl chloride at 14 to 16 feet bgs;
- KP-SB06 – cis-1,2-Dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride at 14 to 16 feet bgs; and,
- KP-SB08 – cis-1,2-dichloroethene and vinyl chloride at 15 to 17 feet bgs.

Analytical results from groundwater samples indicated the presence of chloroform, cis-1,2-dichloroethene, trichloroethene, and vinyl chloride, and iron at concentrations exceeding the Tier 1 Class II groundwater remediation objectives (GROs)<sup>1</sup>. The extent of the groundwater plume has not been defined.

The Phase II Investigation activities described below were performed in order to delineate the undefined exceedances noted by Weston. The investigation activities were proposed and described in the SAP which was approved by the USEPA on August 20, 2012. The goal of the activities was to vertically delineate the nature/extent of the soil impact, collect soil vapor samples, and further characterize groundwater on-site.

## **Phase II Investigation Activities**

Based on findings of the Phase II ESA and as detailed in the approved SAP, Terracon conducted the following activities:

### Soil Boring Activities

Before beginning subsurface investigation activities, Terracon contacted DIGGER (the City of Chicago Utility Locate system) and requested location and markings of subsurface utilities.

A total of five direct-push soil borings (denoted as TB-1 through TB-5) were advanced at the site in the vicinity of the soil borings that previously exhibited elevated VOC concentrations in an attempt to vertically delineate the extent of the soil impacts. The recent boring locations are depicted on the attached Exhibit 2, along with locations of the historical borings advanced during prior investigations. Soil boring logs are provided in Appendix B.

Terracon field screened the soil samples recovered from each soil boring for organic vapors using a photoionization detector (PID) equipped with an approximate 10 eV ultraviolet lamp source. This device provides a direct reading in parts per million (ppm)

<sup>1</sup> Weston conducted in-situ hydraulic conductivity testing that confirmed the site's Class II designation.

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isobutylene equivalents. Upon removal of the sample liner from the borehole, Terracon placed soil samples in re-sealable Ziploc® plastic bags at two foot intervals. After a brief stabilization period, Terracon screened the headspace above the soil in each bag using the PID. The PID unit was calibrated daily using 100 ppm isobutylene gas in accordance with the manufacturer's recommendations. The PID readings were recorded in the field and are noted on the soil boring logs.

**Soil Sample Collection and Handling**

The soil samples were selected with the intent of vertically delineating previously identified exceedances by selecting deeper samples with no visual, olfactory, and/or elevated PID evidence of impact. The soil sampling equipment was cleaned with Alconox™ detergent and rinsed with clean water prior to commencing sampling as well as between each sampling point. Soil borings were backfilled with the soil boring cuttings and supplemented as needed with bentonite pellets.

**Analytical Methods for Soil Investigation**

The following table summarizes the soil sample locations, depth intervals, and analyses:

| <b>Sample Location</b> | <b>Sample Date</b> | <b>Interval Analyzed</b> | <b>Purpose<sup>2</sup></b>   | <b>Analyses</b> |
|------------------------|--------------------|--------------------------|--|-----------------|
| TB-1                   | 8-20-12            | 23-25'                   | Vertically delineate extent of VOC impact in Borings B-2/KP-SB01& KP-SB08.               | VOCs 8260B      |
| TB-2                   | 8-20-12            | 13-15'                   | Vertically delineate extent of VOC impact in Boring B-3/KP-SB09.                         | VOCs 8260B      |
| TB-2 DUP               | 8-20-12            | 13-15                    | QA/QC Sample   | VOCs 8260B      |
| TB-3                   | 8-21-12            | 23-25'                   | Vertically delineate extent of VOC impact in Borings B-4 & KP-SB04.                      | VOCs 8260B      |
| TB-4                   | 8-21-12            | 28-30'                   | Vertically delineate extent of VOC impact in Borings B-5, KP-SB05, KP-SB02, and KP-SB06. | VOCs 8260B      |
| TB-5                   | 8-21-12            | 15-17'                   | Vertically delineate extent of PNA impact in Borings B-8 & KP-SB10.                      | PNAs 8270C      |
| TB-5 DUP               | 8-21-12            | 15-17                    | QA/QC Sample   | PNAs 8270C      |

Soil samples were placed in laboratory supplied glassware and transported on ice to STAT Analysis Corporation (STAT Analysis), Terracon's subcontract laboratory, under standard chain-of-custody procedures. Laboratory analytical results are discussed below. Soil sample analytical results are presented in tabular form in Appendix B.

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<sup>2</sup> Note: borings B-1, etc. were conducted by Brecheisen Engineering, Inc. (BEI) in August 2010; borings KP-SB04, etc. were advanced by Weston Solutions, Inc. (WESTON) July 2012.

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**Soil Vapor Sampling Activities**

Six soil gas screening points (SV-1 through SV-6) were advanced with a truck-mounted Geoprobe® direct-push unit. The locations of the soil gas sampling points are shown on Exhibit 2 – Boring Location Diagram in Appendix A. Each soil gas sampling point was installed at the base of the boring through a Geoprobe PRT system, which provides an isolated interval open to surrounding soil at the base of the drill rod. Each soil vapor sampling probe was advanced to six feet bgs. The soil gas wells consisted of a six inch long stainless steel vapor sampling point with Teflon tubing extending to the ground surface. A fine-grained sand filter pack was installed in the annular space from the base of the well to approximately 6-inches above the sampling point. A bentonite product (approximate 1/8-inch diameter chips) was installed in the annular space from the top of the sand pack to the ground surface and hydrated with potable water.

The integral pump on the PID was used to purge three volumes of air from the tubing prior to sample collection. A flow rate of approximately 200 milliliters per minute (mL/min) was used to calculate the purge volume. After purging, soil vapor samples were collected from each sample point using 1-liter Summa canisters under vacuum using a 100 mL/min flow controller. The table below summarizes the soil vapor sampling points.

| SV Location | Sample Date | Analyses   |
|-------------|-------------|------------|
| SV-01       | 08.21.12    | VOCs TO-15 |
| SV-02       | 08.21.12    | VOCs TO-15 |
| SV-03       | 08.21.12    | VOCs TO-15 |
| SV-04       | 08.21.12    | VOCs TO-15 |
| SV-004 DUP  | 08.21.12    | VOCs TO-15 |
| SV-05       | 08.21.12    | VOCs TO-15 |
| SV-06       | 08.21.12    | VOCs TO-15 |

The analytical laboratory prepared a laboratory control sample (LCS), and a laboratory control duplicate sample (LCSD), using a 5 ppm TO-15 calibration gas and analyzed for internal QA/QC purposes. The laboratory LCS and LCSD sample results are provided in Appendix C.

**Groundwater Monitoring Well Activities**

Terracon's drilling subcontractor installed a total of four permanent groundwater monitoring wells (denoted as MW-4 through MW-7) using a hollow-stem auger drill rig. The wells were constructed using sections of flush-jointed, two-inch outside diameter, schedule 40 PVC threaded pipe. The screened section of each monitoring well consisted of a 0.01-inch slotted section of PVC pipe installed to intersect the water table. Terracon placed fine-grained sand filter pack into each well's annulus from the bottom to approximately one to two feet above the screened section. Terracon placed a bentonite product (approximate 1/8-inch diameter chips) in the annulus from above the filter pack to within two feet of the ground surface. The bentonite chips were then hydrated with

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potable water. Each internal PVC casing was fitted with an expansion cap. Following installation, each monitoring well was developed by removing approximately three well casing volumes using a disposable bailer. The table below summarizes the groundwater locations and analysis.

| MW Location | Sample Date | Analyses            |
|-------------|-------------|---------------------|
| MW-4        | 09.10.12    | VOCs<br>5030B/8260B |
| MW-5        | 09.10.12    | VOCs<br>5030B/8260B |
| MW-6        | 09.10.12    | VOCs<br>5030B/8260B |
| MW-7        | 09.10.12    | VOCs<br>5030B/8260B |

Water Level Measurements

Following the completion of investigation activities, Terracon used laser surveying equipment to measure the ground surface and top of casing (TOC) elevation for each monitoring well relative to a convenient reference benchmark to the nearest 1/100<sup>th</sup> of a foot.

Terracon measured the depth to water level by lowering an electric water tape into each well casing. The electric water tape broadcasted an audible signal upon reaching the water table. Once contact with the groundwater was established, Terracon observed the measurement on the tape at the reference point (top of the well casing) to the nearest 0.01 foot. Terracon recorded this measurement on the boring logs. Water levels were measured from 7.6 to 15.1 feet bgs and are presented in the well logs included in Appendix B. The measured groundwater contours are presented in Exhibit 3 in Appendix A.

Groundwater Sample Collection and Handling

An eight day stabilization period passed before sampling activities and groundwater measurement were recorded. Terracon returned to the site on September 10, 2012 to complete the sampling. Upon removal of the well cap, the distance to the static water level and the total depth of the well was measured using an electronic water level indicator. Terracon cleaned the electric water level indicator between each monitoring well by washing in an Alconox™ and water solution followed by rinsing in potable water. The wells were purged of three well volumes of water and allowed to recharge prior to collecting the samples. A disposable bailer was used to collect groundwater samples for VOC analysis. Terracon filled the laboratory containers directly from the bailer and immediately completed the chain-of-custody documentation and sample labeling. Terracon packaged each sample in an ice-filled cooler for transport to STAT Analysis.

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**Analytical Methods for Hydrogeological Investigation**

The table below summarizes the analytical methods used by the laboratory to analyze groundwater samples.

| Compound Group | Test Method           |
|----------------|-----------------------|
| VOCs           | USEPA SW5030B/SW8260B |

**Analytical Results**

The soil and groundwater analytical results were compared to the Tier 1 Soil Remediation Objectives (SROs) and Groundwater Remediation Objectives (GROs) as set forth in IEPA TACO Regulations (35 IAC Part 742). Illinois has not formally adopted soil gas remediation objectives; however, draft Tier 1 Residential Soil Gas Remediation Objectives (ROs) for the Indoor Inhalation Exposure Route – Diffusion and Advection, have been proposed by the IEPA. Terracon compared the soil gas data to the proposed IEPA objectives and to the U.S. Environmental Protection Agency (USEPA) Office of Solid Waste and Emergency Response (OSWER) Guidance for Evaluation Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils dated November 2002. Terracon compared the soil vapor results to Table 2b Generic Screening Levels (GSLs) with a risk factor of  $10^{-5}$ , Target Shallow Soil Gas Concentrations.

**Soil Sample Results**

Soil laboratory analytical results indicate that one constituent (trichloroethene [TCE]) was detected above the laboratory reporting limit (RL) in the sample from boring TB-4 (28-30' bgs). Analytical results did not indicate exceedances of Tier 1 SROs. Sample results are provided in tabular form as Table 1 of Appendix C.

**Soil Vapor Sample Results**

Numerous VOC constituents were detected above RLs in the soil gas samples collected from the site. Exceedances of the EPA OSWER Screening Levels were detected for 1,3-butadiene in sample SV-02 and SV-03; cis-1,2-dichloroethene in samples SV-01, SV-04, SV-04 DUP and SV-05; trichloroethene (TCE) in samples SV-01 through SV-06; and for vinyl chloride in samples SV-04 and SV-04 DUP.

Illinois does not currently evaluate soil vapor concentrations in its regulatory programs. In 2012, the IEPA proposed amendments adding soil gas evaluation to the TACO 742 regulations; however, the proposed IEPA TACO Tier 1 Indoor/Outdoor Inhalation Exposure Route levels<sup>3</sup> currently are not in force, and are presented for informational purposes only. Soil vapor results are presented in Table 2 of Appendix C.

<sup>3</sup> First Notice, Rulemaking Case R11-9 In the Matter of: Tiered Approach to Corrective Action Objectives (TACO) Indoor Inhalation: Amendments to Title 35 Illinois Administrative Code Part 742, April 19, 2012 See

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**Groundwater Sample Results**

Laboratory analytical results for the four ground water monitoring wells (MW-4 through -MW-7) indicate that levels of the COCs were below their respective GROs for Class I groundwater for the site for VOCs, with the exception of MW-6. The groundwater sample from this location exhibited concentrations of TCE and vinyl chloride above the Class II GROs. Sample results are provided in tabular form in Table 3 of Appendix C.

**Findings/Conclusions**

Based on the information provided in this report, it appears the soil impacts have been vertically delineated. Soil vapor results from several samples indicated exceedances of OSWER Screening Levels and proposed Tier 1 soil gas ROs. Groundwater sample from one location (MW-6) exhibited concentrations of TCE and vinyl chloride above the Class II GROs.

If you have questions or comments please contact the undersigned. Terracon appreciates the opportunity to perform these services for you. Please contact us if you have questions regarding this information or if we can provide any other services.

Sincerely,

**Terracon Consultants, Inc.**

A handwritten signature in black ink that appears to read "Matt Weiss".

Matt Weiss, P.G.  
Project Geologist

A handwritten signature in blue ink that appears to read "Matt Catlin".

Matt Catlin, PE  
Senior Principal

Appendices:      Appendix A – Exhibits  
                        Appendix B – Soil Boring/Monitoring Well Logs  
                        Appendix C – Analytical Results Data and Tables

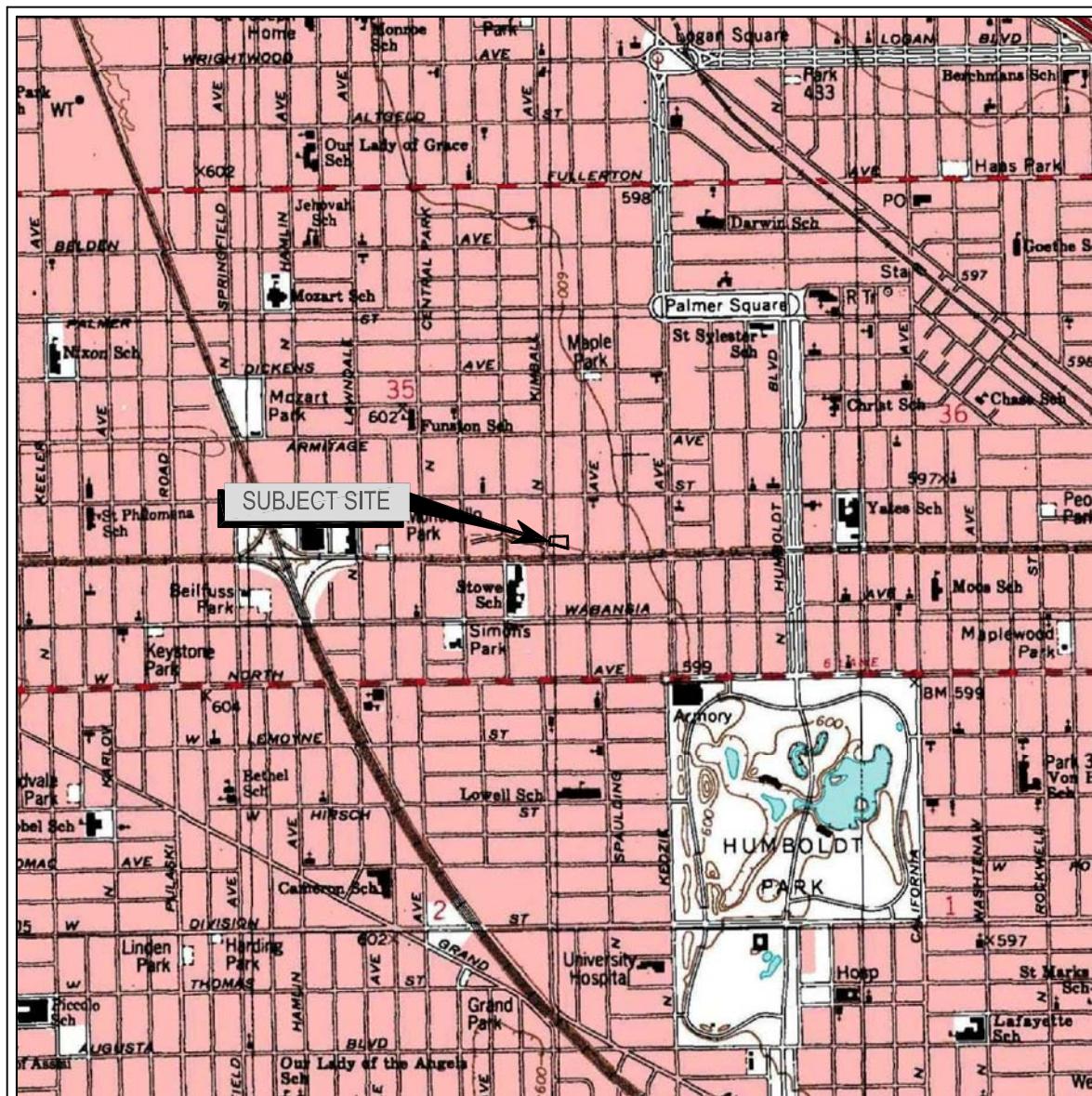
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Appendix B, Table H. The proposed are not formally adopted by the IEPA.

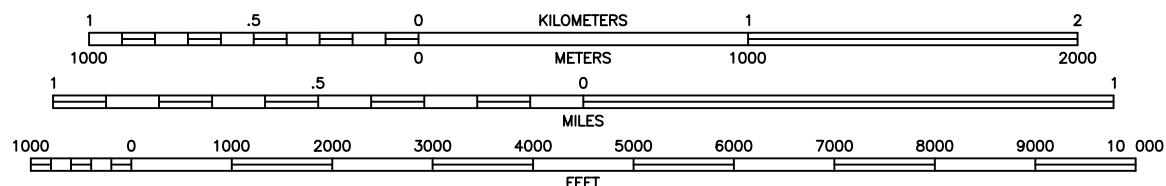
## **Appendix A**

### **Exhibits**

UNITED STATES – DEPARTMENT OF THE INTERIOR – GEOLOGICAL SURVEY



SCALE 1:24 000



CONTOUR INTERVAL 5 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE  
CHICAGO LOOP, IL  
1997  
7.5 MINUTE SERIES (TOPOGRAPHIC)



|               |         |
|---------------|---------|
| Project Mngr: | CCD     |
| Drawn By:     | DWD     |
| Checked By:   | CCD/MRF |
| Approved By:  | CCD     |

|             |               |
|-------------|---------------|
| Project No. | A2127017A     |
| Scale:      | AS SHOWN      |
| File No.    | LSI2127017A-1 |
| Date:       | AUGUST 2012   |

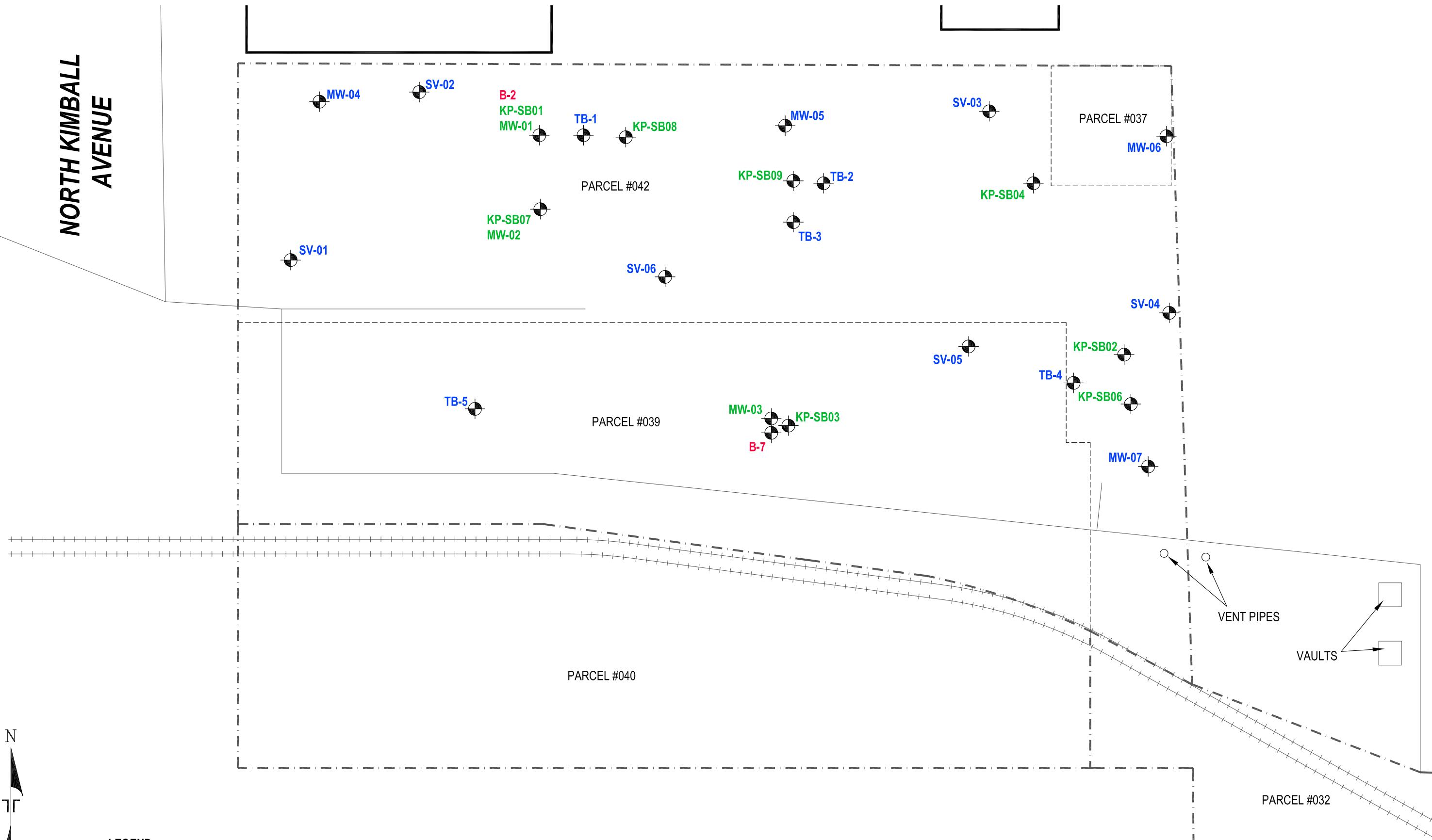
**Terracon**  
Consulting Engineers and Scientists

650 West Lake Street, Suite 420 Chicago, Illinois 60661  
(312) 575-0014 (312) 575-0111

| TOPOGRAPHIC VICINITY MAP  |
|---|
| LIMITED SITE INVESTIGATION<br>1809 NORTH KIMBALL AVENUE<br>CHICAGO, COOK COUNTY, ILLINOIS |

| EXHIBIT |
|---------|
| 1       |

# NORTH KIMBALL AVENUE



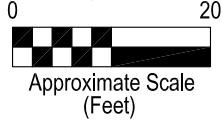
## LEGEND

SUBJECT SITE  
 RAILROAD  
 FENCE



- 2010 SAMPLING LOCATION (BEI)
- 2012 SAMPLING LOCATION (WESTERN)
- 2012 SAMPLING LOCATION (TERRACON)
- VENT PIPES
- VAULT

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES



Approximate Scale  
(Feet)

|               |                    |
|---------------|--------------------|
| Project Mngr: | MKO                |
| Drawn By:     | TLY                |
| Checked By:   | CCD/MRF            |
| Approved By:  | MKO                |
| Project No.   | A2107017-7A        |
| Scale:        | AS SHOWN           |
| File No.      | LSIAS12107017-7A-4 |
| Date:         | SEPTEMBER 2012     |

|               |                    |
|---------------|--------------------|
| Project Mngr: | MKO                |
| Drawn By:     | TLY                |
| Checked By:   | CCD/MRF            |
| Approved By:  | MKO                |
| Project No.   | A2107017-7A        |
| Scale:        | AS SHOWN           |
| File No.      | LSIAS12107017-7A-4 |
| Date:         | SEPTEMBER 2012     |

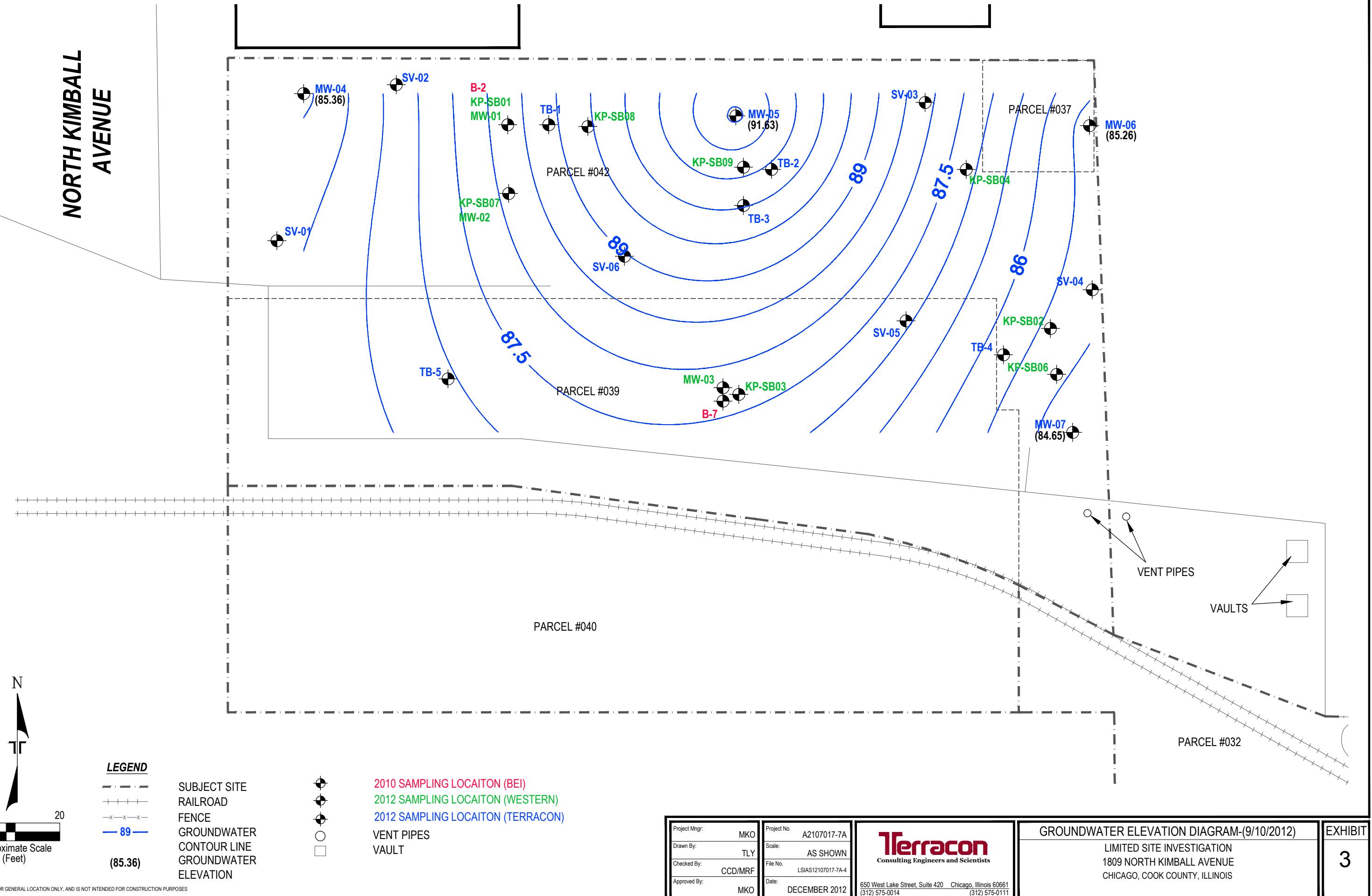


| BORING LOCATION DIAGRAM    |         |
|----------------------------|---------|
| LIMITED SITE INVESTIGATION | EXHIBIT |

1807-1815 NORTH KIMBALL AVENUE  
CHICAGO, COOK COUNTY, ILLINOIS

2

# NORTH KIMBALL AVENUE



**Appendix B**

**Soil Boring/Monitoring Well Logs**

# LOG OF GEO PROBE NO. MW-4

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| CLIENT<br><b>Chicago Department of Environment</b>  |   |               |                          |                  |                 |                                |            |  |  |       |
|---|---|---------------|--------------------------|------------------|-----------------|--------------------------------|------------|--|--|-------|
| SITE<br>1809 North Kimball<br>Chicago, Illinois   | PROJECT<br><b>Comprehensive Site Investigation</b>  |               |                          |                  |                 |                                |            |  |  |       |
| GRAPHIC LOG   | DESCRIPTION   |               |                          |                  |                 |                                |            |  |  | TESTS |
|   |   |               |                          |                  |                 |                                |            |  |  |       |
| DEPTH, ft.  | USCS SYMBOL   | SAMPLES       |                          |                  | TESTS           |                                |            |  |  |       |
| NUMBER  | TYPE  | RECOVERY, in. | SPT - N BLOWS / ft.      | WATER CONTENT, % | DRY UNIT WT pdf | SOIL SAMPLE SENT TO LABORATORY | PID, (ppm) |  |  |       |
| 0.5   | Approx. 6" Concrete<br><b>FILL: SAND, GRAVEL AND CONCRETE</b> ,<br>loose, moist                 | 1             | MC                       | 44               |                 |                                | *ND        |  |  |       |
| 3.5   | <b>LEAN CLAY, TRACE SAND AND GRAVEL</b> , brown, stiff, moist                                   | 2             | MC                       | 60               |                 |                                | *ND        |  |  |       |
| 5   | <b>LEAN CLAY, TRACE SAND AND GRAVEL</b> , dark gray, with black and brown streaks, stiff, moist | 3             | MC                       | 60               |                 |                                | 1.5        |  |  |       |
|   | dark gray, with black streaks   | 4             | MC                       | 60               |                 |                                | *ND        |  |  |       |
|   | gray fine sand seams from 14' to 14.5'<br>gray with brown streaks, moist                        |               |                          |                  |                 |                                | *ND        |  |  |       |
|   | saturated/soft from 17.5' to 20'  |               |                          |                  |                 |                                | *ND        |  |  |       |
| 20  | BOTTOM OF PROBE   |               |                          |                  |                 |                                | *ND        |  |  |       |
| The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.<br>* ND indicates a reading of less than the field detection limit (FDL) of one (1) part per million isobutylene equivalents (ppmi). |   |               |                          |                  |                 |                                |            |  |  |       |
| WATER LEVEL OBSERVATIONS, ft  |   |               | BORING STARTED 8-20-12   |                  |                 |                                |            |  |  |       |
| WL  | ▽ N/A   | ▼             | BORING COMPLETED 8-20-12 |                  |                 |                                |            |  |  |       |
| WL  | ▼   | ▼             | RIG                      | Geo Probe        | FOREMAN         | SA                             |            |  |  |       |
| WL  |   |               | APPROVED                 | TRT              | JOB #           | A2107017                       |            |  |  |       |

# LOG OF GEO PROBE NO. MW-5

Page 1 of 1

| CLIENT   | Chicago Department of Environment       |  |            |             |                          |           |               |                     |                  |   |                                |            |
|--|---|--|------------|-------------|--------------------------|-----------|---------------|---------------------|------------------|---|--------------------------------|------------|
|  |   | PROJECT  |            |             |                          |           |               |                     |                  |   |                                |            |
| SITE   | 1809 North Kimball<br>Chicago, Illinois | Comprehensive Site Investigation   |            |             |                          |           |               |                     |                  |   |                                |            |
|  |   | DESCRIPTION  | DEPTH, ft. | USCS SYMBOL | SAMPLES                  | TESTS     |               |                     |                  |   |                                |            |
| GRAPHIC LOG  |   |  |            |             | NUMBER                   | TYPE      | RECOVERY, in. | SPT - N BLOWS / ft. | WATER CONTENT, % | DRY UNIT WT pdf   | SOIL SAMPLE SENT TO LABORATORY | PID, (ppm) |
|  | 0.5                                     | <b>Approx. 6" Concrete</b><br><b>FILL: SAND, GRAVEL AND CONCRETE</b> , loose, dry    |            |             | 1                        | MC        | 52            |                     |                  |   |                                | *ND        |
|  | 2.5                                     | <b>SILTY CLAY, TRACE SAND AND GRAVEL</b> , dark brown, stiff, moist                  |            |             | 2                        | MC        | 60            |                     |                  |   |                                | *ND        |
|  | 5                                       | <b>LEAN CLAY, TRACE SAND AND GRAVEL</b> , brownish gray, stiff, moist                |            |             | 3                        | MC        | 60            |                     |                  |   |                                | *ND        |
|  | 10                                      | brown, with gray streaks   |            |             | 4                        | MC        | 60            |                     |                  |   |                                | *ND        |
|  | 14                                      |  |            |             |                          |           |               |                     |                  |   |                                | *ND        |
|  | 15                                      | <b>SAND, WITH GRAVEL</b> , dense, moist  |            |             |                          |           |               |                     |                  |   |                                | *ND        |
|  | 20                                      | <b>LEAN CLAY, TRACE SAND AND GRAVEL</b> , dark brown, with gray streaks, soft, moist |            |             |                          |           |               |                     |                  |   |                                | *ND        |
|  |   | BOTTOM OF PROBE  |            |             |                          |           |               |                     |                  |   |                                |            |
| The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. |   |  |            |             |                          |           |               |                     |                  | * ND indicates a reading of less than the field detection limit (FDL) of one (1) part per million isobutylene equivalents (ppmi). |                                |            |
| WATER LEVEL OBSERVATIONS, ft   |   |  |            |             | BORING STARTED 8-20-12   |           |               |                     |                  |   |                                |            |
| WL   | ▽ N/A                                   | ▽  |            |             | BORING COMPLETED 8-20-12 |           |               |                     |                  |   |                                |            |
| WL   | ▽                                       | ▽  |            |             | RIG                      | Geo Probe | FOREMAN       | SA                  |                  |   |                                |            |
| WL   |   |  |            |             | APPROVED                 | TRT       | JOB #         | A2107017            |                  |   |                                |            |

# LOG OF GEO PROBE NO. MW-6

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| CLIENT<br><b>Chicago Department of Environment</b>   |   | PROJECT<br><b>Comprehensive Site Investigation</b> |             |                               |           |               |                        |                     |                    |               |
|--|---|--|-------------|-------------------------------|-----------|---------------|------------------------|---------------------|--------------------|---------------|
| GRAPHIC LOG  | DESCRIPTION   | DEPTH, ft.   | USCS SYMBOL | SAMPLES                       |           |               | TESTS                  |                     |                    | PID,<br>(ppm) |
|  |   |  |             | NUMBER                        | TYPE      | RECOVERY, in. | SPT - N<br>BLOWS / ft. | WATER<br>CONTENT, % | DRY UNIT WT<br>pcf |               |
|  | 0.5      Approx. 6" Concrete<br><u>FILL: CONCRETE, SAND AND ASPHALT</u> , loose, moist                |  |             | 1                             | MC        | 36            |                        |                     |                    | *ND           |
|  | 3 <u>FILL: LEAN CLAY, TRACE SAND AND GRAVEL</u> , dark brown and black, stiff                         |  |             | 2                             | MC        | 60            |                        |                     |                    | *ND           |
|  | 5.5     apparent slag material at 5.5'<br><u>LEAN CLAY, TRACE SAND AND GRAVEL</u> , gray, soft, moist |  |             | 3                             | MC        | 42            |                        |                     |                    | 36.2          |
|  | brown, with gray streaks, stiff, moist  |  |             | 4                             | MC        | 36            |                        |                     |                    | 232           |
|  | soft/saturated from 14' to 15'<br>brown, with gray streaks, soft, saturated                           |  |             |                               |           |               |                        |                     |                    | *ND           |
|  | sand seam with gravel from 17' to 17.5'   |  |             |                               |           |               |                        |                     |                    | *ND           |
|  | 20     BOTTOM OF PROBE  | 20   |             |                               |           |               |                        |                     |                    | *ND           |
| The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. |   |  |             |                               |           |               |                        |                     |                    |               |
| * ND indicates a reading of less than the field detection limit (FDL) of one (1) part per million isobutylene equivalents (ppmi).      |   |  |             |                               |           |               |                        |                     |                    |               |
| WATER LEVEL OBSERVATIONS, ft   |   |  |             | BORING STARTED      8-20-12   |           |               |                        |                     |                    |               |
| WL   | ▽   | N/A  | ▼           | BORING COMPLETED      8-20-12 |           |               |                        |                     |                    |               |
| WL   | ▽   |  | ▼           | RIG                           | Geo Probe | FOREMAN       | SA                     |                     |                    |               |
| WL   |   |  |             | APPROVED                      | TRT       | JOB #         | A2107017               |                     |                    |               |

# LOG OF GEO PROBE NO. MW-7

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| CLIENT   | Chicago Department of Environment  |   |             |                          |           |               |                     |                  |                 |                                |
|--|--|---|-------------|--------------------------|-----------|---------------|---------------------|------------------|-----------------|--------------------------------|
|  |  | PROJECT<br>Comprehensive Site Investigation |             |                          |           |               |                     |                  |                 |                                |
| GRAPHIC LOG  | DESCRIPTION  | DEPTH, ft.                                  | USCS SYMBOL | SAMPLES                  |           |               | TESTS               |                  |                 |                                |
|  |  |   |             | NUMBER                   | TYPE      | RECOVERY, in. | SPT - N BLOWS / ft. | WATER CONTENT, % | DRY UNIT WT pdf | SOIL SAMPLE SENT TO LABORATORY |
|  | <b>FILL: SILTY SAND, TRACE GRAVEL AND COAL</b> , medium dense, moist   | 3   |             | 1                        | MC        | 50            |                     |                  |                 | *ND                            |
|  | <b>FILL: LEAN CLAY, TRACE SAND AND GRAVEL</b> , gray, with brown streaks, stiff, moist, hydrocarbon odor                   | 5   |             | 2                        | MC        | 60            |                     |                  |                 | 1.4                            |
|  | <b>LEAN CLAY, TRACE SAND AND GRAVEL</b> , brown and gray, stiff, moist   |   |             | 3                        | MC        | 60            |                     |                  |                 | 13.3                           |
|  | soft/saturated from 9' to 10'<br>hydrocarbon odor<br>brown and gray, soft, moist<br>hydrocarbon odor<br>gray, stiff, moist |   |             | 4                        | MC        | 60            |                     |                  |                 | 35.3                           |
|  | brown, with gray streaks, soft, moist  |   |             |                          |           |               |                     |                  |                 | *ND                            |
|  |  |   |             |                          |           |               |                     |                  |                 | *ND                            |
|  |  |   |             |                          |           |               |                     |                  |                 | *ND                            |
|  |  |   |             |                          |           |               |                     |                  |                 | *ND                            |
|  | BOTTOM OF PROBE  | 20  |             |                          |           |               |                     |                  |                 |                                |
| The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. |  |   |             |                          |           |               |                     |                  |                 |                                |
| * ND indicates a reading of less than the field detection limit (FDL) of one (1) part per million isobutylene equivalents (ppmi).      |  |   |             |                          |           |               |                     |                  |                 |                                |
| WATER LEVEL OBSERVATIONS, ft   |  |   |             | BORING STARTED 8-20-12   |           |               |                     |                  |                 |                                |
| WL   | ▽ N/A  | ▼   |             | BORING COMPLETED 8-20-12 |           |               |                     |                  |                 |                                |
| WL   | ▼  | ▼   |             | RIG                      | Geo Probe | FOREMAN       | SA                  |                  |                 |                                |
| WL   |  |   |             | APPROVED                 | TRT       | JOB #         | A2107017            |                  |                 |                                |

# LOG OF GEO PROBE NO. TB-01

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| CLIENT   | Chicago Department of Environment  |                                  |                        |                          |                     |                  |                 |                                |            |  |  |
|--|--|----------------------------------|------------------------|--------------------------|---------------------|------------------|-----------------|--------------------------------|------------|--|--|
|  |  | PROJECT                          |                        |                          |                     |                  |                 |                                |            |  |  |
| SITE   | 1809 North Kimball<br>Chicago, Illinois  | Comprehensive Site Investigation |                        |                          |                     |                  |                 |                                |            |  |  |
|  |  | TESTS                            |                        |                          |                     |                  |                 |                                |            |  |  |
| GRAPHIC LOG  | DESCRIPTION  | DEPTH, ft.                       | USCS SYMBOL            | SAMPLES                  |                     |                  |                 |                                |            |  |  |
|  |  | NUMBER                           | TYPE                   | RECOVERY, in.            | SPT - N BLOWS / ft. | WATER CONTENT, % | DRY UNIT WT pdf | SOIL SAMPLE SENT TO LABORATORY | PID, (ppm) |  |  |
| 0.5  | Approx. 6" Concrete  | 1                                | MC                     | 30                       |                     |                  |                 |                                | 4.1        |  |  |
| 1  | Approx. 6" Sand Base Course  |                                  |                        |                          |                     |                  |                 |                                | 3.2        |  |  |
| 5  | <u>FILL: LEAN CLAY, TRACE SAND, GRAVEL</u> , dark gray, stiff, moist brick and sand from 4' to 5'<br>black sludge material at 5', strong hydrocarbon odor (from 5' to 20')<br><u>LEAN CLAY, TRACE SAND AND GRAVEL</u> , dark gray, moist | 2                                | MC                     | 60                       |                     |                  |                 | TB-01 5'-7'                    | 79.0       |  |  |
| 10   | stiff to hard  | 3                                | MC                     | 60                       |                     |                  |                 |                                | 20.1       |  |  |
| 15   |  | 4                                | MC                     | 60                       |                     |                  |                 |                                | 47.1       |  |  |
| 17   | <u>SILTY CLAY, TRACE SAND AND GRAVEL</u> , gray, soft, moist   | 5                                | MC                     | 60                       |                     |                  |                 |                                | *ND        |  |  |
| 20   | fine sand seam from 24' to 24.5'<br>solvent odor from 24'-25'<br>hard to stiff from 25' to 30'<br>fine sand seam from 26' to 26.5'   | 6                                | MC                     | 60                       |                     |                  |                 |                                | *ND        |  |  |
| 25   |  |                                  |                        |                          |                     |                  |                 |                                | *ND        |  |  |
| 30   | BOTTOM OF PROBE  |                                  |                        |                          |                     |                  |                 | TB-01 23'-25'                  | *ND        |  |  |
|  |  |                                  |                        |                          |                     |                  |                 | TB-01 27'-29'                  | *ND        |  |  |
|  |  |                                  |                        |                          |                     |                  |                 |                                | *ND        |  |  |
|  |  |                                  |                        |                          |                     |                  |                 |                                |            |  |  |
| The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. |  |                                  |                        |                          |                     |                  |                 |                                |            |  |  |
| * ND indicates a reading of less than the field detection limit (FDL) of one (1) part per million isobutylene equivalents (ppmi).      |  |                                  |                        |                          |                     |                  |                 |                                |            |  |  |
| WATER LEVEL OBSERVATIONS, ft   |  |                                  | BORING STARTED 8-20-12 |                          |                     |                  |                 |                                |            |  |  |
| WL   | ▽  | N/A                              | ▽                      | BORING COMPLETED 8-20-12 |                     |                  |                 |                                |            |  |  |
| WL   | ▽  |                                  | ▽                      | RIG                      | Geo Probe           | FOREMAN          | SA              |                                |            |  |  |
| WL   |  |                                  |                        | APPROVED                 | TRT                 | JOB #            | A2107017        |                                |            |  |  |

# LOG OF GEO PROBE NO. TB-02

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| CLIENT                       | Chicago Department of Environment  |   |             |                          |           |               |                     |                  |                 |   |
|------------------------------|--|---|-------------|--------------------------|-----------|---------------|---------------------|------------------|-----------------|---|
|                              |  | PROJECT<br>Comprehensive Site Investigation |             |                          |           |               |                     |                  |                 |   |
| GRAPHIC LOG                  | DESCRIPTION  | DEPTH, ft.                                  | USCS SYMBOL | SAMPLES                  |           |               | TESTS               |                  |                 |   |
|                              |  |   |             | NUMBER                   | TYPE      | RECOVERY, in. | SPT - N BLOWS / ft. | WATER CONTENT, % | DRY UNIT WT pdf |   |
|                              | 0.5 Approx. 6" Concrete<br>Approx. 6" Crushed Aggregates<br><u>FILL: LEAN CLAY, TRACE SAND,</u><br><u>GRAVEL AND BRICK</u> , dark gray, stiff,<br>moist<br>strong hydrocarbon odor from 4' to 5' and<br>5' to 7' | 1   | MC          | 50                       |           |               |                     |                  |                 | *ND   |
|                              | 5 <u>LEAN CLAY, TRACE SAND AND</u><br><u>GRAVEL</u> , gray, stiff, moist<br><u>SILTY CLAY, TRACE SAND AND</u><br><u>GRAVEL</u> , gray, soft, moist   | 2   | MC          | 60                       |           |               |                     |                  |                 | 18.2  |
|                              | 7 <u>LEAN CLAY, TRACE SAND AND</u><br><u>GRAVEL</u> , gray, with brown streaks, stiff,<br>moist<br>dark gray, moist<br>soft/saturated from 17'-20'   | 3   | MC          | 60                       |           |               |                     |                  |                 | 41.1  |
|                              | 10   | 4   | MC          | 48                       |           |               |                     |                  |                 | *ND   |
|                              | 15   |   |             |                          |           |               |                     |                  |                 | *ND   |
|                              | 20 BOTTOM OF PROBE   |   |             |                          |           |               |                     |                  |                 | *ND   |
|                              | The stratification lines represent the approximate boundary lines<br>between soil and rock types: in-situ, the transition may be gradual.  |   |             |                          |           |               |                     |                  |                 | *ND indicates a reading of less than the field detection limit<br>(FDL) of one (1) part per million isobutylene equivalents (ppmi). |
| WATER LEVEL OBSERVATIONS, ft |  |   |             | BORING STARTED 8-20-12   |           |               |                     |                  |                 |   |
| WL                           | ▽ N/A  | ▼   |             | BORING COMPLETED 8-20-12 |           |               |                     |                  |                 |   |
| WL                           | ▽  | ▼   |             | RIG                      | Geo Probe | FOREMAN       | SA                  |                  |                 |   |
| WL                           |  |   |             | APPROVED                 | TRT       | JOB #         | A2107017            |                  |                 |   |

# LOG OF GEO PROBE NO. TB-03

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| CLIENT                       | Chicago Department of Environment  | PROJECT                          |                          |           |         |               |                     |                  |                 |      |
|------------------------------|--|----------------------------------|--------------------------|-----------|---------|---------------|---------------------|------------------|-----------------|------|
|                              |  | Comprehensive Site Investigation |                          |           |         |               |                     |                  |                 |      |
| GRAPHIC LOG                  | DESCRIPTION  | DEPTH, ft.                       | USCS SYMBOL              | SAMPLES   |         |               | TESTS               |                  |                 |      |
|                              |  |                                  |                          | NUMBER    | TYPE    | RECOVERY, in. | SPT - N BLOWS / ft. | WATER CONTENT, % | DRY UNIT WT pdf |      |
| 0.5                          | Approx. 6" Concrete  |                                  |                          | 1         | MC      | 30            |                     |                  |                 | 5.2  |
| 1                            | Approx. 6" Crushed Aggregates  |                                  |                          |           |         |               |                     |                  |                 | 2.2  |
| 3                            | <u>FILL: LEAN CLAY, TRACE SAND, GRAVEL AND ASPHALT FRAGMENTS</u><br><u>LEAN CLAY, TRACE SAND AND GRAVEL</u> , dark gray, stiff, moist gray, with brown streaks, moist hydrocarbon odor from 5' to 7' |                                  |                          | 2         | MC      | 60            |                     |                  |                 | 26.7 |
| 10                           | <u>SILTY CLAY, TRACE SAND AND GRAVEL</u> , gray, stiff, moist solvent odor from 10'-15'  |                                  |                          | 3         | MC      | 45            |                     |                  |                 | 1078 |
|                              | dark gray, moist   |                                  |                          | 4         | MC      | 40            |                     |                  |                 | 1706 |
|                              | soft/saturated from 17'-20'  |                                  |                          | 5         | MC      | 48            |                     |                  |                 | 350  |
|                              | dark gray, soft, moist   |                                  |                          |           |         |               |                     |                  |                 | 35.4 |
| 25                           | <u>LEAN CLAY, TRACE SAND AND GRAVEL</u> , gray to dark gray, soft, moist   |                                  |                          | 6         | MC      | 54            |                     |                  |                 | *ND  |
| 30                           | BOTTOM OF PROBE  |                                  |                          |           |         |               |                     |                  |                 | 4.8  |
|                              | The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.   |                                  |                          |           |         |               |                     |                  |                 | *ND  |
|                              |  |                                  |                          |           |         |               |                     |                  |                 | *ND  |
|                              |  |                                  |                          |           |         |               |                     |                  |                 | *ND  |
|                              |  |                                  |                          |           |         |               |                     |                  |                 | *ND  |
|                              |  |                                  |                          |           |         |               |                     |                  |                 | *ND  |
|                              |  |                                  |                          |           |         |               |                     |                  |                 |      |
| WATER LEVEL OBSERVATIONS, ft |  | BORING STARTED 8-21-12           |                          |           |         |               |                     |                  |                 |      |
| WL                           | ▽ N/A  | ▼                                | BORING COMPLETED 8-21-12 |           |         |               |                     |                  |                 |      |
| WL                           | ▼  | ▼                                | RIG                      | Geo Probe | FOREMAN | SA            |                     |                  |                 |      |
| WL                           |  |                                  | APPROVED                 | TRT       | JOB #   | A2107017      |                     |                  |                 |      |

# LOG OF GEO PROBE NO. TB-04

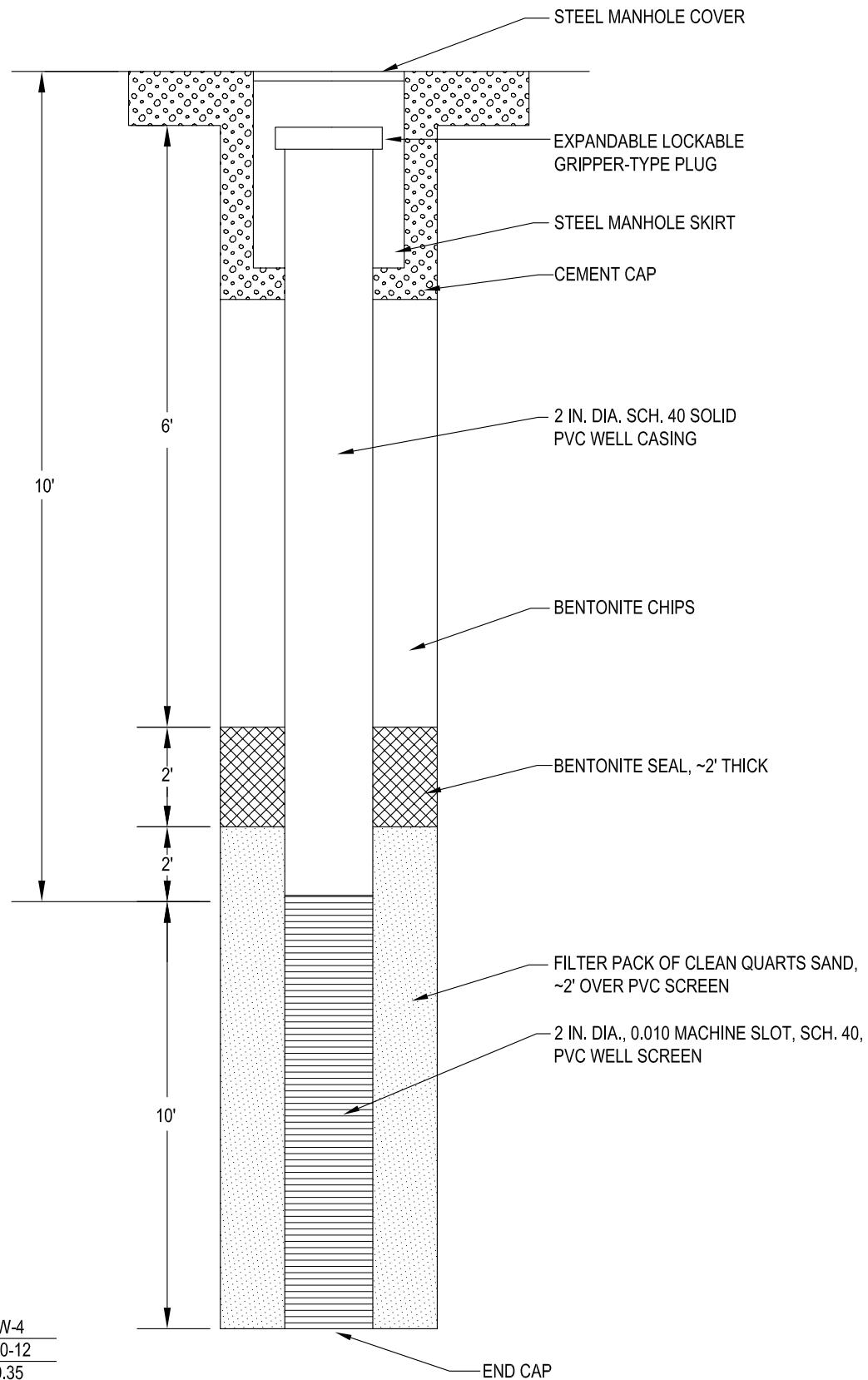
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| CLIENT   | Chicago Department of Environment   | PROJECT                          |             |                          |   |               |                     |                  |                 |      |  |  |  |  |  |
|--|---|----------------------------------|-------------|--------------------------|---|---------------|---------------------|------------------|-----------------|------|--|--|--|--|--|
|  |   | Comprehensive Site Investigation |             |                          |   |               |                     |                  |                 |      |  |  |  |  |  |
| GRAPHIC LOG  | DESCRIPTION   | DEPTH, ft.                       | USCS SYMBOL | SAMPLES                  |   |               | TESTS               |                  |                 |      |  |  |  |  |  |
|  |   |                                  |             | NUMBER                   | TYPE  | RECOVERY, in. | SPT - N BLOWS / ft. | WATER CONTENT, % | DRY UNIT WT pdf |      |  |  |  |  |  |
| 0.5  | Approx. 6" Concrete   |                                  |             | 1                        | MC  | 30            |                     |                  |                 | 3.0  |  |  |  |  |  |
| 1  | Approx. 6" Crushed Aggregates   |                                  |             |                          |   |               |                     |                  |                 | 75.2 |  |  |  |  |  |
| 3  | <u>FILL: LEAN CLAY, TRACE SAND, GRAVEL, CONCRETE, BRICK AND ASPHALT FRAGMENTS</u> , loose, dry      |                                  |             |                          |   |               |                     |                  |                 | 755  |  |  |  |  |  |
| 5  | <u>LEAN CLAY, TRACE SAND AND GRAVEL</u> , dark gray to black, moist, hydrocarbon odor               |                                  |             | 2                        | MC  | 60            |                     |                  |                 | 2490 |  |  |  |  |  |
| 10   | dark gray, with brown streaks, stiff, moist solvent odor from 5'-20'                                |                                  |             |                          |   |               |                     |                  |                 |      |  |  |  |  |  |
| 10   | <u>SILTY CLAY, TRACE SAND AND GRAVEL</u> , gray, soft, moist  |                                  |             | 3                        | MC  | 50            |                     |                  |                 | 1205 |  |  |  |  |  |
| 15   |   |                                  |             | 4                        | MC  | 48            |                     |                  |                 | 80.1 |  |  |  |  |  |
| 20   |   |                                  |             | 5                        | MC  | 60            |                     |                  |                 | 13.4 |  |  |  |  |  |
| 22   | <u>LEAN CLAY, TRACE SAND AND GRAVEL</u> , gray, stiff, moist sand seam from 21' to 22', gray, loose |                                  |             |                          |   |               |                     |                  |                 | *ND  |  |  |  |  |  |
| 25   | <u>SILTY CLAY, TRACE SAND AND GRAVEL</u> , gray, soft, moist  |                                  |             | 6                        | MC  | 60            |                     |                  |                 | 10.2 |  |  |  |  |  |
| 30   | <u>LEAN CLAY, TRACE SAND AND GRAVEL</u> , gray, stiff, moist  |                                  |             |                          |   |               |                     |                  |                 | *ND  |  |  |  |  |  |
| 30   | <u>SILTY CLAY, TRACE SAND AND GRAVEL</u> , gray, stiff, moist                                       |                                  |             | 7                        | MC  | 60            |                     |                  |                 | *ND  |  |  |  |  |  |
| 35   | BOTTOM OF PROBE   |                                  |             |                          |   |               |                     |                  |                 | *ND  |  |  |  |  |  |
|  |   |                                  |             |                          |   |               |                     |                  |                 | *ND  |  |  |  |  |  |
|  |   |                                  |             |                          |   |               |                     |                  |                 | *ND  |  |  |  |  |  |
|  |   |                                  |             |                          |   |               |                     |                  |                 | *ND  |  |  |  |  |  |
|  |   |                                  |             |                          |   |               |                     |                  |                 |      |  |  |  |  |  |
| The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. |   |                                  |             |                          | * ND indicates a reading of less than the field detection limit (FDL) of one (1) part per million isobutylene equivalents (ppmi). |               |                     |                  |                 |      |  |  |  |  |  |
| WATER LEVEL OBSERVATIONS, ft   |   |                                  |             | BORING STARTED 8-21-12   |   |               |                     |                  |                 |      |  |  |  |  |  |
| WL   | ▽ N/A   | ▼                                |             | BORING COMPLETED 8-21-12 |   |               |                     |                  |                 |      |  |  |  |  |  |
| WL   | ▼   | ▼                                |             | RIG                      | Geo Probe   | FOREMAN       | SA                  |                  |                 |      |  |  |  |  |  |
| WL   |   |                                  |             | APPROVED                 | TRT   | JOB #         | A2107017            |                  |                 |      |  |  |  |  |  |

# LOG OF GEO PROBE NO. TB-05

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| CLIENT  | Chicago Department of Environment  |   |             |   |      |               |                     |                  |                  |                                |
|---|--|---|-------------|---|------|---------------|---------------------|------------------|------------------|--------------------------------|
|   |  | PROJECT<br>Comprehensive Site Investigation |             |   |      |               |                     |                  |                  |                                |
| GRAPHIC LOG   | DESCRIPTION  | DEPTH, ft.                                  | USCS SYMBOL | SAMPLES   |      |               | TESTS               |                  |                  |                                |
|   |  |   |             | NUMBER  | TYPE | RECOVERY, in. | SPT - N BLOWS / ft. | WATER CONTENT, % | DRY UNIT WT pdf  | SOIL SAMPLE SENT TO LABORATORY |
|   | <b>FILL: CRUSHED GRAVEL, BRICK, GLASS, SAND WOOD AND CONCRETE</b> , loose, dry |   |             | 1   | MC   | 48            |                     |                  |                  | *ND                            |
| 5   |  |   |             | 2   | MC   | 36            |                     |                  |                  | *ND                            |
| 7   | <b>FILL: SILTY CLAY, TRACE SAND AND GRAVEL</b> , black, soft, moist            |   |             |   |      |               |                     |                  |                  | *ND                            |
| 10  | <b>FILL: COARSE SAND AND GRAVEL</b> , loose, dry                               |   |             | 3   | MC   | 48            |                     |                  |                  | *ND                            |
| 12  | <b>SILTY CLAY, TRACE SAND AND GRAVEL</b> , black, soft, moist                  |   |             |   |      |               |                     |                  |                  | *ND                            |
| 15  | <b>LEAN CLAY, TRACE SAND AND GRAVEL</b> , brown, with gray, stiff, moist       |   |             | 4   | MC   | 60            |                     |                  |                  | *ND                            |
| 16  | <b>MEDIUM SAND</b> , gray, dense, wet  |   |             |   |      |               |                     |                  | TB-05<br>15'-17' | *ND                            |
| 18  | <b>LEAN CLAY, TRACE SAND AND GRAVEL</b> , gray, soft, moist                    |   |             |   |      |               |                     |                  | TB-05<br>18'-20' | *ND                            |
| 20  | BOTTOM OF PROBE  |   |             |   |      |               |                     |                  |                  |                                |
| The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. <span style="float: right;">* ND indicates a reading of less than the field detection limit (FDL) of one (1) part per million isobutylene equivalents (ppmi).</span> |  |   |             |   |      |               |                     |                  |                  |                                |
| WATER LEVEL OBSERVATIONS, ft  |  |   |             | <b>BORING STARTED</b> 8-21-12<br><b>BORING COMPLETED</b> 8-21-12<br><b>RIG</b> Geo Probe <b>FOREMAN</b> SA<br><b>APPROVED</b> TRT <b>JOB #</b> A2107017 |      |               |                     |                  |                  |                                |
| WL  | ▽ 15.00  | ▼   |             | <b>BORING STARTED</b> 8-21-12<br><b>BORING COMPLETED</b> 8-21-12<br><b>RIG</b> Geo Probe <b>FOREMAN</b> SA<br><b>APPROVED</b> TRT <b>JOB #</b> A2107017 |      |               |                     |                  |                  |                                |
| WL  | ▼  | ▼   |             | <b>BORING STARTED</b> 8-21-12<br><b>BORING COMPLETED</b> 8-21-12<br><b>RIG</b> Geo Probe <b>FOREMAN</b> SA<br><b>APPROVED</b> TRT <b>JOB #</b> A2107017 |      |               |                     |                  |                  |                                |
| WL  |  |   |             | <b>BORING STARTED</b> 8-21-12<br><b>BORING COMPLETED</b> 8-21-12<br><b>RIG</b> Geo Probe <b>FOREMAN</b> SA<br><b>APPROVED</b> TRT <b>JOB #</b> A2107017 |      |               |                     |                  |                  |                                |



WELL NAME: MW-4  
 INSTALLATION DATE: 8-20-12  
 TOP OF CASING ELEVATION 99.35  
 DEPTH TO WATER: N/A  
 GROUNDWATER ELEVATION: N/A  
 JOB NUMBER: A2107017-7A

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

NOT TO SCALE

|               |        |
|---------------|--------|
| Project Mngr: | TT     |
| Drawn By:     | DWD    |
| Checked By:   | TT/MRF |
| Approved By:  | TT     |

|             |                  |
|-------------|------------------|
| Project No. | A2107017-7A      |
| Scale:      | AS SHOWN         |
| File No.    | SRPA2107017-7A-1 |
| Date:       | AUGUST 2012      |

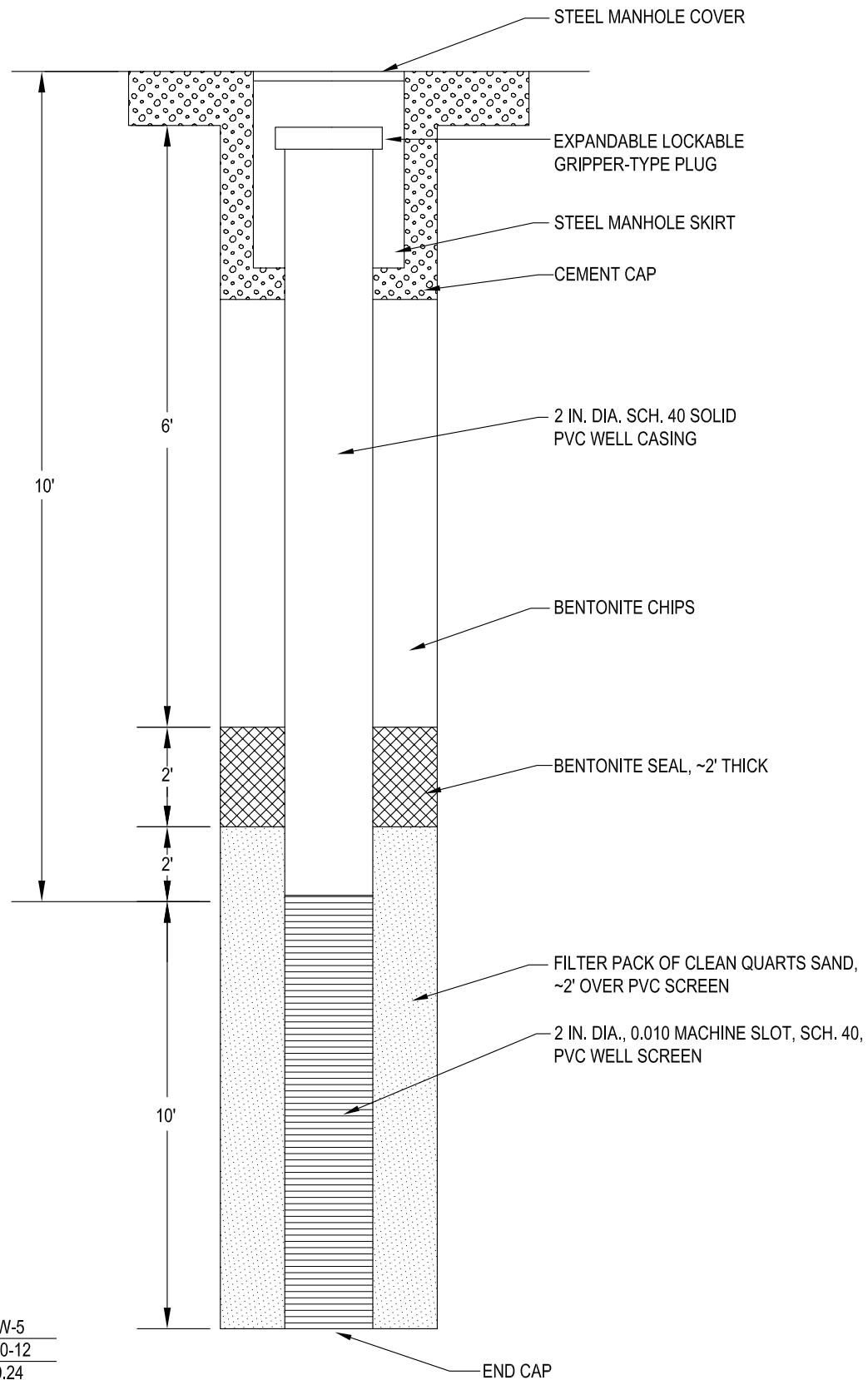
**Terracon**  
Consulting Engineers and Scientists

650 West Lake Street, Suite 420 Chicago, Illinois 60661  
(312) 575-0014 (312) 575-0111

#### MONITORING WELL CONSTRUCTION DIAGRAM

SITE REMEDIATION PROGRAM  
PROPOSED KIMBALL PARK  
1809 NORTH KIMBALL AVENUE  
CHICAGO, COOK COUNTY, IL

EXHIBIT



WELL NAME: MW-5  
 INSTALLATION DATE: 8-20-12  
 TOP OF CASING ELEVATION 99.24  
 DEPTH TO WATER: N/A  
 GROUNDWATER ELEVATION: N/A  
 JOB NUMBER: A2107017-7A

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

NOT TO SCALE

|               |        |              |                  |
|---------------|--------|--------------|------------------|
| Project Mngr: | TT     | Project No.: | A2107017-7A      |
| Drawn By:     | DWD    | Scale:       | AS SHOWN         |
| Checked By:   | TT/MRF | File No.:    | SRPA2107017-7A-2 |
| Approved By:  | TT     | Date:        | AUGUST 2012      |

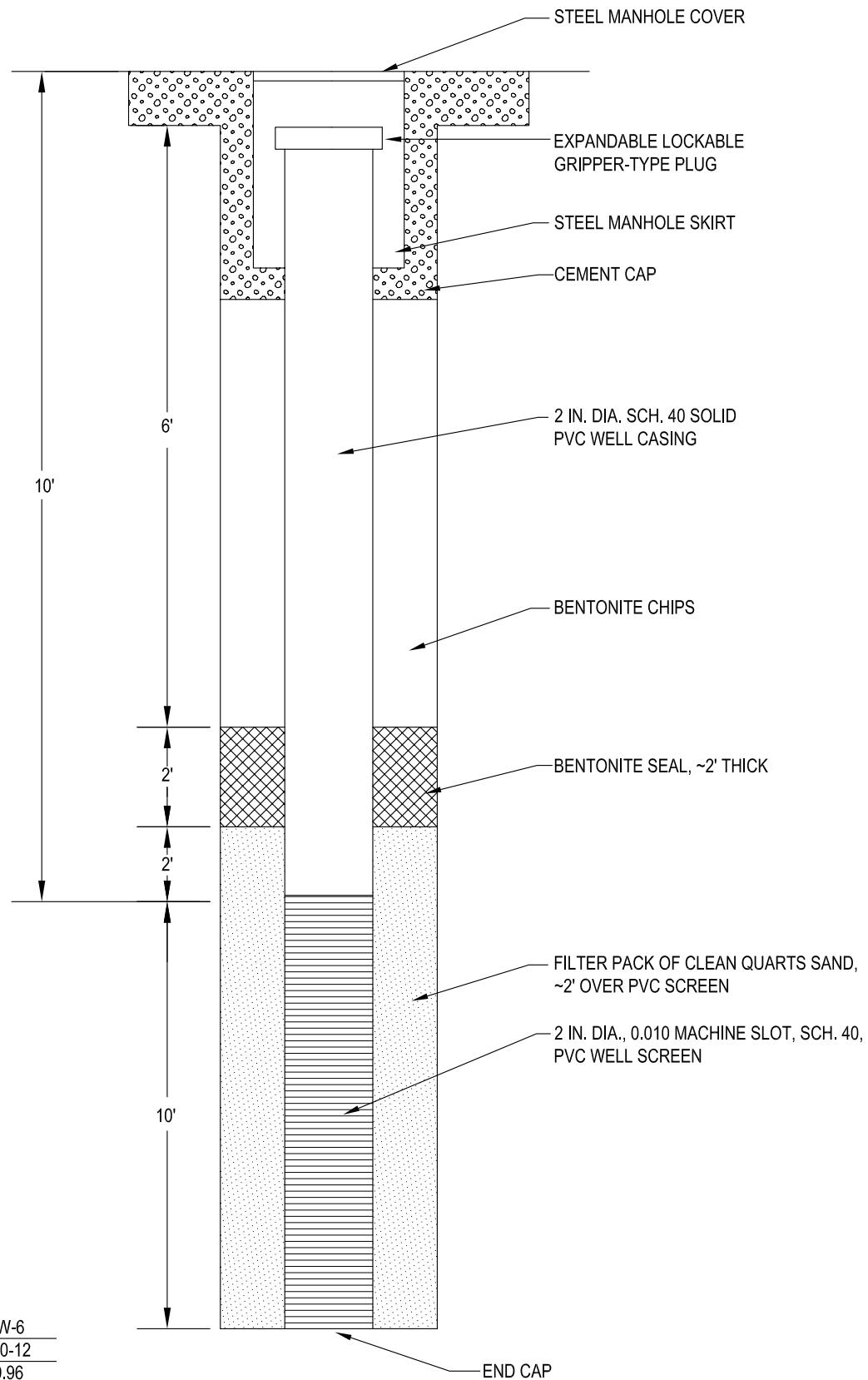
**Terracon**  
Consulting Engineers and Scientists

650 West Lake Street, Suite 420 Chicago, Illinois 60661  
(312) 575-0014 (312) 575-0111

#### MONITORING WELL CONSTRUCTION DIAGRAM

SITE REMEDIATION PROGRAM  
PROPOSED KIMBALL PARK  
1809 NORTH KIMBALL AVENUE  
CHICAGO, COOK COUNTY, IL

EXHIBIT



WELL NAME: MW-6  
 INSTALLATION DATE: 8-20-12  
 TOP OF CASING ELEVATION 99.96  
 DEPTH TO WATER: N/A  
 GROUNDWATER ELEVATION: N/A  
 JOB NUMBER: A2107017-7A

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

NOT TO SCALE

|               |        |
|---------------|--------|
| Project Mngr: | TT     |
| Drawn By:     | DWD    |
| Checked By:   | TT/MRF |
| Approved By:  | TT     |

|             |                  |
|-------------|------------------|
| Project No. | A2107017-7A      |
| Scale:      | AS SHOWN         |
| File No.    | SRPA2107017-7A-3 |
| Date:       | AUGUST 2012      |

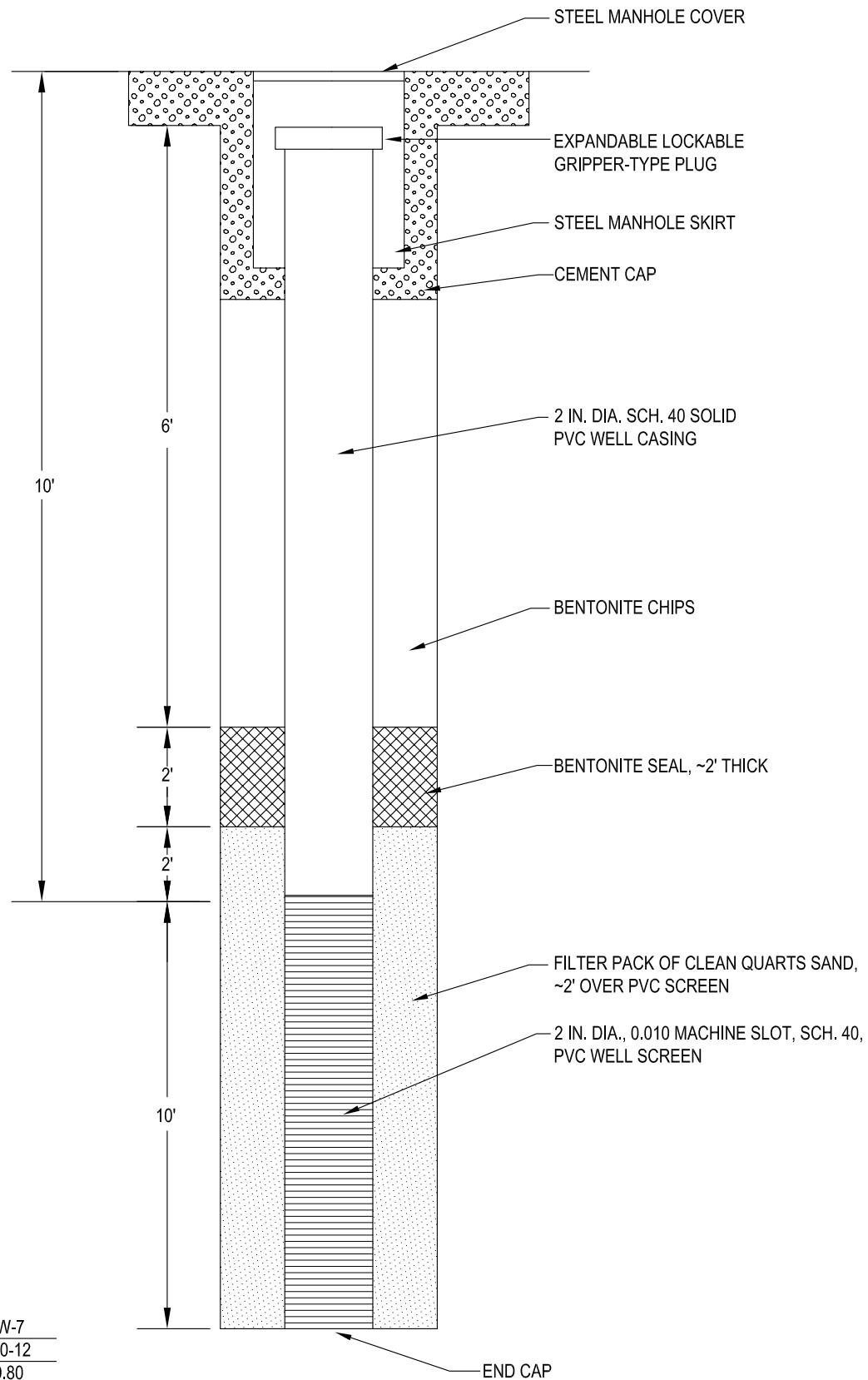
**Terracon**  
Consulting Engineers and Scientists

650 West Lake Street, Suite 420 Chicago, Illinois 60661  
(312) 575-0014 (312) 575-0111

#### MONITORING WELL CONSTRUCTION DIAGRAM

SITE REMEDIATION PROGRAM  
PROPOSED KIMBALL PARK  
1809 NORTH KIMBALL AVENUE  
CHICAGO, COOK COUNTY, IL

EXHIBIT



WELL NAME: MW-7  
 INSTALLATION DATE: 8-20-12  
 TOP OF CASING ELEVATION 99.80  
 DEPTH TO WATER: N/A  
 GROUNDWATER ELEVATION: N/A  
 JOB NUMBER: A2107017-7A

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

NOT TO SCALE

|               |        |              |                  |
|---------------|--------|--------------|------------------|
| Project Mngr: | TT     | Project No.: | A2107017-7A      |
| Drawn By:     | DWD    | Scale:       | AS SHOWN         |
| Checked By:   | TT/MRF | File No.:    | SRPA2107017-7A-4 |
| Approved By:  | TT     | Date:        | AUGUST 2012      |

**Terracon**  
Consulting Engineers and Scientists

650 West Lake Street, Suite 420 Chicago, Illinois 60661  
(312) 575-0014 (312) 575-0111

#### MONITORING WELL CONSTRUCTION DIAGRAM

SITE REMEDIATION PROGRAM  
PROPOSED KIMBALL PARK  
1809 NORTH KIMBALL AVENUE  
CHICAGO, COOK COUNTY, IL

EXHIBIT

## **Appendix C**

### **Analytical Results Data and Tables**

# **STAT** Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 [STATinfo@STATAnalysis.com](mailto:STATinfo@STATAnalysis.com)

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

August 28, 2012

Terracon Consultants, Inc.  
135 Ambassador Drive  
Naperville, IL 60540  
Telephone: (312) 575-0014  
Fax: (312) 575-0111

RE: A2107017-7A, DOE-Kimball, Chicago, IL

STAT Project No 12080686

Dear Tom Tucker:

STAT Analysis received 16 samples for the referenced project on 8/21/2012 1:30:00 PM. The analytical results are presented in the following report.

This report is revised to reflect changes made after the initial report was issued.

All analyses were performed in accordance with the requirements of 35 IAC part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Kurt Clarkson

Senior Project Manager

*The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.*

**Client:** Terracon Consultants, Inc.  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab Order:** 12080686

**Work Order Sample Summary**

| <b>Lab Sample ID</b> | <b>Client Sample ID</b> | <b>Tag Number</b> | <b>Collection Date</b> | <b>Date Received</b> |
|----------------------|-------------------------|-------------------|------------------------|----------------------|
| 12080686-001A        | TB-01-5-7               |                   | 8/2/2012 2:00:00 PM    | 8/21/2012            |
| 12080686-001B        | TB-01-5-7               |                   | 8/2/2012 2:00:00 PM    | 8/21/2012            |
| 12080686-002A        | TB-01-23-25             |                   | 8/20/2012 2:10:00 PM   | 8/21/2012            |
| 12080686-002B        | TB-01-23-25             |                   | 8/20/2012 2:10:00 PM   | 8/21/2012            |
| 12080686-003A        | TB-01-27-29             |                   | 8/20/2012 2:20:00 PM   | 8/21/2012            |
| 12080686-003B        | TB-01-27-29             |                   | 8/20/2012 2:20:00 PM   | 8/21/2012            |
| 12080686-004A        | TB-02-13-15             |                   | 8/20/2012 3:00:00 PM   | 8/21/2012            |
| 12080686-004B        | TB-02-13-15             |                   | 8/20/2012 3:00:00 PM   | 8/21/2012            |
| 12080686-005A        | TB-02-Dup               |                   | 8/20/2012 3:00:00 PM   | 8/21/2012            |
| 12080686-005B        | TB-02-Dup               |                   | 8/20/2012 3:00:00 PM   | 8/21/2012            |
| 12080686-006A        | TB-02-17-19             |                   | 8/20/2012 3:10:00 PM   | 8/21/2012            |
| 12080686-006B        | TB-02-17-19             |                   | 8/20/2012 3:10:00 PM   | 8/21/2012            |
| 12080686-007A        | TB-03-23-25             |                   | 8/21/2012 9:00:00 AM   | 8/21/2012            |
| 12080686-007B        | TB-03-23-25             |                   | 8/21/2012 9:00:00 AM   | 8/21/2012            |
| 12080686-008A        | TB-03-27-29             |                   | 8/21/2012 9:10:00 AM   | 8/21/2012            |
| 12080686-008B        | TB-03-27-29             |                   | 8/21/2012 9:10:00 AM   | 8/21/2012            |
| 12080686-009A        | TB-04-28-30             |                   | 8/21/2012 10:00:00 AM  | 8/21/2012            |
| 12080686-009B        | TB-04-28-30             |                   | 8/21/2012 10:00:00 AM  | 8/21/2012            |
| 12080686-010A        | TB-04-32-34             |                   | 8/21/2012 10:10:00 AM  | 8/21/2012            |
| 12080686-010B        | TB-04-32-34             |                   | 8/21/2012 10:10:00 AM  | 8/21/2012            |
| 12080686-011A        | TB-05-15-17             |                   | 8/21/2012 11:00:00 AM  | 8/21/2012            |
| 12080686-012A        | TB-05-Dup               |                   | 8/21/2012 11:00:00 AM  | 8/21/2012            |
| 12080686-013A        | TC-05-18-20             |                   | 8/21/2012 11:10:00 AM  | 8/21/2012            |
| 12080686-014A        | TB-6                    |                   |                        | 8/21/2012            |
| 12080686-014B        | TB-6                    |                   |                        | 8/21/2012            |
| 12080686-015A        | Method Blank            |                   | 8/21/2012 1:30:00 PM   | 8/21/2012            |
| 12080686-016A        | Trip Blank              |                   |                        | 8/21/2012            |

**CLIENT:** Terracon Consultants, Inc.  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab Order:** 12080686

**CASE NARRATIVE**

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The VOC soil Method Blank (MBLK) analyzed 08/22/2012 had recovery of the following compounds outside of control limits:

Dibromofluoromethane surrogate: (119% recovery, QC limits 83-119%).

The VOC soil Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) analyzed 08/22/2012 had recovery of the following compounds outside of control limits:

Bromomethane: (136% (LCSD) recovery, QC limits 70-130%)

Carbon Disulfide: (135%/137% (LCS/LCSD) recovery, QC limits 70-130%)

Dibromofluoromethane surrogate: (124%/119% (LCS/LCSD) recovery, QC limits 83-119%).

The VOC soil Matrix Spike/Matrix Spike Duplicate (MS/MSD) prepared from sample TB-03-23-25 (12080686-007) had multiple compounds and RPD's outside control limits.

**STAT** Analysis Corporation

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** August 28, 2012**Date Printed:** August 28, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080686-002

**Client Sample ID:** TB-01-23-25**Collection Date** 8/20/2012 2:10:00 PM**Matrix:** Soil

| Analyses                                   | Result              | RL     | Qualifier | Units                       | DF | Date Analyzed       |
|--|---------------------|--------|-----------|-----------------------------|----|---------------------|
| <b>Volatile Organic Compounds by GC/MS</b> | <b>SW5035/8260B</b> |        |           | Prep Date: <b>8/21/2012</b> |    | Analyst: <b>PS</b>  |
| Acetone                                    | ND                  | 0.073  |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Benzene                                    | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Bromodichloromethane                       | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Bromoform                                  | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Bromomethane                               | ND                  | 0.0098 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| 2-Butanone                                 | ND                  | 0.073  |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Carbon disulfide                           | ND                  | 0.049  |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Carbon tetrachloride                       | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Chlorobenzene                              | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Chloroethane                               | ND                  | 0.0098 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Chloroform                                 | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Chloromethane                              | ND                  | 0.0098 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Dibromochloromethane                       | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| 1,1-Dichloroethane                         | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| 1,2-Dichloroethane                         | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| 1,1-Dichloroethene                         | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| cis-1,2-Dichloroethene                     | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| trans-1,2-Dichloroethene                   | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| 1,2-Dichloropropane                        | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| cis-1,3-Dichloropropene                    | ND                  | 0.002  |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| trans-1,3-Dichloropropene                  | ND                  | 0.002  |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Ethylbenzene                               | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| 2-Hexanone                                 | ND                  | 0.02   |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| 4-Methyl-2-pentanone                       | ND                  | 0.02   |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Methylene chloride                         | ND                  | 0.0098 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Methyl tert-butyl ether                    | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Styrene                                    | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| 1,1,2,2-Tetrachloroethane                  | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Tetrachloroethene                          | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Toluene                                    | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| 1,1,1-Trichloroethane                      | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| 1,1,2-Trichloroethane                      | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Trichloroethene                            | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Vinyl chloride                             | ND                  | 0.0049 |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| Xylenes, Total                             | ND                  | 0.015  |           | mg/Kg-dry                   | 1  | 8/22/2012           |
| <b>Percent Moisture</b>                    | <b>D2974</b>        |        |           | Prep Date: <b>8/22/2012</b> |    | Analyst: <b>MNG</b> |
| Percent Moisture                           | 20.4                | 0.2    | *         | wt%                         | 1  | 8/23/2012           |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** August 28, 2012**Date Printed:** August 28, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080686-004

**Client Sample ID:** TB-02-13-15**Collection Date** 8/20/2012 3:00:00 PM**Matrix:** Soil

| Analyses                                   | Result | RL     | Qualifier | Units                | DF           | Date Analyzed |
|--|--------|--------|-----------|----------------------|--------------|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |        |        |           |                      |              |               |
| Acetone                                    | ND     | 0.065  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Benzene                                    | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Bromodichloromethane                       | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Bromoform                                  | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Bromomethane                               | ND     | 0.0087 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 2-Butanone                                 | ND     | 0.065  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Carbon disulfide                           | ND     | 0.043  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Carbon tetrachloride                       | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Chlorobenzene                              | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Chloroethane                               | ND     | 0.0087 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Chloroform                                 | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Chloromethane                              | ND     | 0.0087 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Dibromochloromethane                       | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 1,1-Dichloroethane                         | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 1,2-Dichloroethane                         | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 1,1-Dichloroethene                         | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| cis-1,2-Dichloroethene                     | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| trans-1,2-Dichloroethene                   | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 1,2-Dichloropropane                        | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| cis-1,3-Dichloropropene                    | ND     | 0.0017 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| trans-1,3-Dichloropropene                  | ND     | 0.0017 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Ethylbenzene                               | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 2-Hexanone                                 | ND     | 0.017  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 4-Methyl-2-pentanone                       | ND     | 0.017  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Methylene chloride                         | ND     | 0.0087 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Methyl tert-butyl ether                    | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Styrene                                    | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Tetrachloroethene                          | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Toluene                                    | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 1,1,1-Trichloroethane                      | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 1,1,2-Trichloroethane                      | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Trichloroethene                            | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Vinyl chloride                             | ND     | 0.0043 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Xylenes, Total                             | ND     | 0.013  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| <b>Percent Moisture</b>                    |        |        |           |                      |              |               |
| Percent Moisture                           | D2974  |        |           | Prep Date: 8/22/2012 | Analyst: MNG |               |
|  | 11.2   | 0.2    | *         | wt%                  | 1            | 8/23/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** August 28, 2012**Date Printed:** August 28, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080686-005

**Client Sample ID:** TB-02-Dup**Collection Date** 8/20/2012 3:00:00 PM**Matrix:** Soil

| Analyses                                   | Result       | RL     | Qualifier | Units                | DF           | Date Analyzed |
|--|--------------|--------|-----------|----------------------|--------------|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |              |        |           |                      |              |               |
| Acetone                                    | ND           | 0.07   |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Benzene                                    | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Bromodichloromethane                       | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Bromoform                                  | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Bromomethane                               | ND           | 0.0094 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 2-Butanone                                 | ND           | 0.07   |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Carbon disulfide                           | ND           | 0.047  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Carbon tetrachloride                       | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chlorobenzene                              | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chloroethane                               | ND           | 0.0094 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chloroform                                 | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chloromethane                              | ND           | 0.0094 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Dibromochloromethane                       | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1-Dichloroethane                         | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,2-Dichloroethane                         | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1-Dichloroethene                         | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| cis-1,2-Dichloroethene                     | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| trans-1,2-Dichloroethene                   | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,2-Dichloropropane                        | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| cis-1,3-Dichloropropene                    | ND           | 0.0019 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| trans-1,3-Dichloropropene                  | ND           | 0.0019 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Ethylbenzene                               | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 2-Hexanone                                 | ND           | 0.019  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 4-Methyl-2-pentanone                       | ND           | 0.019  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Methylene chloride                         | ND           | 0.0094 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Methyl tert-butyl ether                    | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Styrene                                    | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Tetrachloroethene                          | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Toluene                                    | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1,1-Trichloroethane                      | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1,2-Trichloroethane                      | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Trichloroethene                            | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Vinyl chloride                             | ND           | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Xylenes, Total                             | ND           | 0.014  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| <b>Percent Moisture</b>                    |              |        |           |                      |              |               |
| Percent Moisture                           | <b>D2974</b> |        |           | Prep Date: 8/22/2012 | Analyst: MNG |               |
|  | 19.8         | 0.2    | *         | wt%                  | 1            | 8/23/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** August 28, 2012**Date Printed:** August 28, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080686-007

**Client Sample ID:** TB-03-23-25**Collection Date** 8/21/2012 9:00:00 AM**Matrix:** Soil

| Analyses                                   | Result | RL     | Qualifier | Units                | DF           | Date Analyzed |
|--|--------|--------|-----------|----------------------|--------------|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |        |        |           |                      |              |               |
| Acetone                                    | ND     | 0.063  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Benzene                                    | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Bromodichloromethane                       | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Bromoform                                  | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Bromomethane                               | ND     | 0.0084 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 2-Butanone                                 | ND     | 0.063  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Carbon disulfide                           | ND     | 0.042  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Carbon tetrachloride                       | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chlorobenzene                              | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chloroethane                               | ND     | 0.0084 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chloroform                                 | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chloromethane                              | ND     | 0.0084 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Dibromochloromethane                       | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1-Dichloroethane                         | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,2-Dichloroethane                         | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1-Dichloroethene                         | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| cis-1,2-Dichloroethene                     | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| trans-1,2-Dichloroethene                   | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,2-Dichloropropane                        | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| cis-1,3-Dichloropropene                    | ND     | 0.0017 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| trans-1,3-Dichloropropene                  | ND     | 0.0017 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Ethylbenzene                               | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 2-Hexanone                                 | ND     | 0.017  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 4-Methyl-2-pentanone                       | ND     | 0.017  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Methylene chloride                         | ND     | 0.0084 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Methyl tert-butyl ether                    | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Styrene                                    | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Tetrachloroethene                          | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Toluene                                    | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1,1-Trichloroethane                      | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1,2-Trichloroethane                      | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Trichloroethene                            | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Vinyl chloride                             | ND     | 0.0042 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Xylenes, Total                             | ND     | 0.013  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| <b>Percent Moisture</b>                    |        |        |           |                      |              |               |
| Percent Moisture                           | D2974  |        |           | Prep Date: 8/21/2012 | Analyst: PBG |               |
|  |        | 18.4   | 0.2       | *                    | wt%          | 8/22/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

# STAT Analysis Corporation

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: August 28, 2012

Date Printed: August 28, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080686-009

**Client Sample ID:** TB-04-28-30

**Collection Date** 8/21/2012 10:00:00 AM

**Matrix:** Soil

| Analyses                                   | Result | RL     | Qualifier | Units                | DF           | Date Analyzed |
|--|--------|--------|-----------|----------------------|--------------|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |        |        |           |                      |              |               |
| Acetone                                    | ND     | 0.071  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Benzene                                    | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Bromodichloromethane                       | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Bromoform                                  | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Bromomethane                               | ND     | 0.0095 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 2-Butanone                                 | ND     | 0.071  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Carbon disulfide                           | ND     | 0.047  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Carbon tetrachloride                       | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chlorobenzene                              | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chloroethane                               | ND     | 0.0095 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chloroform                                 | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Chloromethane                              | ND     | 0.0095 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Dibromochloromethane                       | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1-Dichloroethane                         | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,2-Dichloroethane                         | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1-Dichloroethene                         | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| cis-1,2-Dichloroethene                     | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| trans-1,2-Dichloroethene                   | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,2-Dichloropropane                        | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| cis-1,3-Dichloropropene                    | ND     | 0.0019 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| trans-1,3-Dichloropropene                  | ND     | 0.0019 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Ethylbenzene                               | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 2-Hexanone                                 | ND     | 0.019  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 4-Methyl-2-pentanone                       | ND     | 0.019  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Methylene chloride                         | ND     | 0.0095 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Methyl tert-butyl ether                    | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Styrene                                    | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Tetrachloroethene                          | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Toluene                                    | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1,1-Trichloroethane                      | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| 1,1,2-Trichloroethane                      | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Trichloroethene                            | 0.0049 | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Vinyl chloride                             | ND     | 0.0047 |           | mg/Kg-dry            | 1            | 8/23/2012     |
| Xylenes, Total                             | ND     | 0.014  |           | mg/Kg-dry            | 1            | 8/23/2012     |
| <b>Percent Moisture</b>                    |        |        |           |                      |              |               |
| Percent Moisture                           | D2974  |        |           | Prep Date: 8/22/2012 | Analyst: MNG |               |
|  |        | 18.4   | 0.2       | *                    | wt%          | 8/23/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

# STAT Analysis Corporation

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: August 28, 2012

Date Printed: August 28, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080686-011

**Client Sample ID:** TB-05-15-17

**Collection Date** 8/21/2012 11:00:00 AM  
**Matrix:** Soil

| Analyses                                       | Result                   | RL    | Qualifier | Units                       | DF | Date Analyzed      |
|--|--------------------------|-------|-----------|-----------------------------|----|--------------------|
| <b>Semivolatile Organic Compounds by GC/MS</b> |                          |       |           |                             |    |                    |
|  | <b>SW8270C (SW3550B)</b> |       |           | Prep Date: <b>8/22/2012</b> |    | Analyst: <b>DM</b> |
| Acenaphthene                                   | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Acenaphthylene                                 | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Aniline  | ND                       | 0.42  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Anthracene                                     | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Benz(a)anthracene                              | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Benzidine                                      | ND                       | 0.41  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Benzo(a)pyrene                                 | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Benzo(b)fluoranthene                           | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Benzo(g,h,i)perylene                           | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Benzo(k)fluoranthene                           | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Benzoic acid                                   | ND                       | 1     |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Benzyl alcohol                                 | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Bis(2-chloroethoxy)methane                     | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Bis(2-chloroethyl)ether                        | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Bis(2-ethylhexyl)phthalate                     | ND                       | 1     |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 4-Bromophenyl phenyl ether                     | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Butyl benzyl phthalate                         | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Carbazole                                      | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 4-Chloroaniline                                | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 4-Chloro-3-methylphenol                        | ND                       | 0.41  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 2-Chloronaphthalene                            | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 2-Chlorophenol                                 | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 4-Chlorophenyl phenyl ether                    | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Chrysene                                       | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Dibenz(a,h)anthracene                          | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Dibenzofuran                                   | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 1,2-Dichlorobenzene                            | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 1,3-Dichlorobenzene                            | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 1,4-Dichlorobenzene                            | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 3,3'-Dichlorobenzidine                         | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 2,4-Dichlorophenol                             | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Diethyl phthalate                              | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 2,4-Dimethylphenol                             | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| Dimethyl phthalate                             | ND                       | 0.21  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 4,6-Dinitro-2-methylphenol                     | ND                       | 0.41  |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 2,4-Dinitrophenol                              | ND                       | 1     |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 2,4-Dinitrotoluene                             | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |
| 2,6-Dinitrotoluene                             | ND                       | 0.041 |           | mg/Kg-dry                   | 1  | 8/22/2012          |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

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B - Analyte detected in the associated Method Blank

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** August 28, 2012**Date Printed:** August 28, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080686-011

**Client Sample ID:** TB-05-15-17**Collection Date** 8/21/2012 11:00:00 AM**Matrix:** Soil

| Analyses                                       | Result | RL    | Qualifier | Units                | DF           | Date Analyzed |
|--|--------|-------|-----------|----------------------|--------------|---------------|
| <b>Semivolatile Organic Compounds by GC/MS</b> |        |       |           |                      |              |               |
| Di-n-butyl phthalate                           | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Di-n-octyl phthalate                           | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Fluoranthene                                   | ND     | 0.041 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Fluorene                                       | ND     | 0.041 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Hexachlorobenzene                              | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Hexachlorobutadiene                            | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Hexachlorocyclopentadiene                      | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Hexachloroethane                               | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Indeno(1,2,3-cd)pyrene                         | ND     | 0.041 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Isophorone                                     | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 2-Methylnaphthalene                            | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 2-Methylphenol                                 | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 4-Methylphenol                                 | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Naphthalene                                    | ND     | 0.041 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 2-Nitroaniline                                 | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 3-Nitroaniline                                 | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 4-Nitroaniline                                 | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 2-Nitrophenol                                  | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 4-Nitrophenol                                  | ND     | 0.41  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Nitrobenzene                                   | ND     | 0.041 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| N-Nitrosodi-n-propylamine                      | ND     | 0.041 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| N-Nitrosodimethylamine                         | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| N-Nitrosodiphenylamine                         | ND     | 0.041 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 2, 2'-oxybis(1-Chloropropane)                  | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Pentachlorophenol                              | ND     | 0.041 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Phenanthrene                                   | ND     | 0.041 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Phenol   | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Pyrene   | ND     | 0.041 |           | mg/Kg-dry            | 1            | 8/22/2012     |
| Pyridine                                       | ND     | 0.84  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 1,2,4-Trichlorobenzene                         | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 2,4,5-Trichlorophenol                          | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| 2,4,6-Trichlorophenol                          | ND     | 0.21  |           | mg/Kg-dry            | 1            | 8/22/2012     |
| <b>Percent Moisture</b>                        |        |       |           |                      |              |               |
| Percent Moisture                               | D2974  |       |           | Prep Date: 8/21/2012 | Analyst: PBG |               |
|  | 20.7   | 0.2   | *         | wt%                  | 1            | 8/22/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

# STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: August 28, 2012

Date Printed: August 28, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080686-012

**Client Sample ID:** TB-05-Dup

**Collection Date** 8/21/2012 11:00:00 AM

**Matrix:** Soil

| Analyses                                       | Result                   | RL    | Qualifier | Units                       | DF | Date Analyzed      |
|--|--------------------------|-------|-----------|-----------------------------|----|--------------------|
| <b>Semivolatile Organic Compounds by GC/MS</b> |                          |       |           |                             |    |                    |
|  | <b>SW8270C (SW3550B)</b> |       |           | Prep Date: <b>8/22/2012</b> |    | Analyst: <b>DM</b> |
| Acenaphthene                                   | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Acenaphthylene                                 | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Aniline  | ND                       | 0.39  |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Anthracene                                     | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Benz(a)anthracene                              | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Benzidine                                      | ND                       | 0.39  |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Benzo(a)pyrene                                 | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Benzo(b)fluoranthene                           | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Benzo(g,h,i)perylene                           | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Benzo(k)fluoranthene                           | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Benzoic acid                                   | ND                       | 0.97  |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Benzyl alcohol                                 | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Bis(2-chloroethoxy)methane                     | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Bis(2-chloroethyl)ether                        | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Bis(2-ethylhexyl)phthalate                     | ND                       | 0.97  |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 4-Bromophenyl phenyl ether                     | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Butyl benzyl phthalate                         | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Carbazole                                      | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 4-Chloroaniline                                | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 4-Chloro-3-methylphenol                        | ND                       | 0.39  |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 2-Chloronaphthalene                            | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 2-Chlorophenol                                 | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 4-Chlorophenyl phenyl ether                    | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Chrysene                                       | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Dibenz(a,h)anthracene                          | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Dibenzofuran                                   | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 1,2-Dichlorobenzene                            | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 1,3-Dichlorobenzene                            | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 1,4-Dichlorobenzene                            | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 3,3'-Dichlorobenzidine                         | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 2,4-Dichlorophenol                             | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Diethyl phthalate                              | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 2,4-Dimethylphenol                             | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| Dimethyl phthalate                             | ND                       | 0.2   |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 4,6-Dinitro-2-methylphenol                     | ND                       | 0.39  |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 2,4-Dinitrophenol                              | ND                       | 0.97  |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 2,4-Dinitrotoluene                             | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |
| 2,6-Dinitrotoluene                             | ND                       | 0.039 |           | mg/Kg-dry                   | 1  | 8/23/2012          |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

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HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** August 28, 2012**Date Printed:** August 28, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080686-012

**Client Sample ID:** TB-05-Dup**Collection Date** 8/21/2012 11:00:00 AM**Matrix:** Soil

| Analyses                                       | Result       | RL                       | Qualifier | Units                       | DF                          | Date Analyzed      |
|--|--------------|--------------------------|-----------|-----------------------------|-----------------------------|--------------------|
| <b>Semivolatile Organic Compounds by GC/MS</b> |              |                          |           |                             |                             |                    |
|  |              | <b>SW8270C (SW3550B)</b> |           |                             | Prep Date: <b>8/22/2012</b> | Analyst: <b>DM</b> |
| Di-n-butyl phthalate                           | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Di-n-octyl phthalate                           | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Fluoranthene                                   | ND           | 0.039                    |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Fluorene                                       | ND           | 0.039                    |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Hexachlorobenzene                              | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Hexachlorobutadiene                            | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Hexachlorocyclopentadiene                      | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Hexachloroethane                               | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Indeno(1,2,3-cd)pyrene                         | ND           | 0.039                    |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Isophorone                                     | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 2-Methylnaphthalene                            | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 2-Methylphenol                                 | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 4-Methylphenol                                 | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Naphthalene                                    | ND           | 0.039                    |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 2-Nitroaniline                                 | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 3-Nitroaniline                                 | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 4-Nitroaniline                                 | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 2-Nitrophenol                                  | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 4-Nitrophenol                                  | ND           | 0.39                     |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Nitrobenzene                                   | ND           | 0.039                    |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| N-Nitrosodi-n-propylamine                      | ND           | 0.039                    |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| N-Nitrosodimethylamine                         | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| N-Nitrosodiphenylamine                         | ND           | 0.039                    |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 2, 2'-oxybis(1-Chloropropane)                  | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Pentachlorophenol                              | ND           | 0.039                    |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Phenanthrene                                   | ND           | 0.039                    |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Phenol   | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Pyrene   | ND           | 0.039                    |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| Pyridine                                       | ND           | 0.79                     |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 1,2,4-Trichlorobenzene                         | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 2,4,5-Trichlorophenol                          | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| 2,4,6-Trichlorophenol                          | ND           | 0.2                      |           | mg/Kg-dry                   | 1                           | 8/23/2012          |
| <b>Percent Moisture</b>                        |              |                          |           |                             |                             |                    |
| Percent Moisture                               | <b>D2974</b> |                          |           | Prep Date: <b>8/21/2012</b> | Analyst: <b>PBG</b>         |                    |
|  | 14.9         | 0.2                      | *         | wt%                         | 1                           | 8/22/2012          |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

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R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** August 28, 2012**Date Printed:** August 28, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080686-015

**Client Sample ID:** Method Blank**Collection Date** 8/21/2012 1:30:00 PM**Matrix:** Trip Blank

| Analyses                                   | Result              | RL    | Qualifier | Units                       | DF | Date Analyzed       |
|--|---------------------|-------|-----------|-----------------------------|----|---------------------|
| <b>Volatile Organic Compounds by GC/MS</b> |                     |       |           |                             |    |                     |
|  | <b>SW5035/8260B</b> |       |           | Prep Date: <b>8/21/2012</b> |    | Analyst: <b>ERP</b> |
| Acetone                                    | ND                  | 0.075 |           | mg/Kg                       | 1  | 8/24/2012           |
| Benzene                                    | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Bromodichloromethane                       | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Bromoform                                  | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Bromomethane                               | ND                  | 0.01  |           | mg/Kg                       | 1  | 8/24/2012           |
| 2-Butanone                                 | ND                  | 0.075 |           | mg/Kg                       | 1  | 8/24/2012           |
| Carbon disulfide                           | ND                  | 0.05  |           | mg/Kg                       | 1  | 8/24/2012           |
| Carbon tetrachloride                       | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Chlorobenzene                              | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Chloroethane                               | ND                  | 0.01  |           | mg/Kg                       | 1  | 8/24/2012           |
| Chloroform                                 | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Chloromethane                              | ND                  | 0.01  |           | mg/Kg                       | 1  | 8/24/2012           |
| Dibromochloromethane                       | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| 1,1-Dichloroethane                         | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| 1,2-Dichloroethane                         | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| 1,1-Dichloroethene                         | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| cis-1,2-Dichloroethene                     | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| trans-1,2-Dichloroethene                   | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| 1,2-Dichloropropane                        | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| cis-1,3-Dichloropropene                    | ND                  | 0.002 |           | mg/Kg                       | 1  | 8/24/2012           |
| trans-1,3-Dichloropropene                  | ND                  | 0.002 |           | mg/Kg                       | 1  | 8/24/2012           |
| Ethylbenzene                               | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| 2-Hexanone                                 | ND                  | 0.02  |           | mg/Kg                       | 1  | 8/24/2012           |
| 4-Methyl-2-pentanone                       | ND                  | 0.02  |           | mg/Kg                       | 1  | 8/24/2012           |
| Methylene chloride                         | ND                  | 0.01  |           | mg/Kg                       | 1  | 8/24/2012           |
| Methyl tert-butyl ether                    | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Styrene                                    | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| 1,1,2,2-Tetrachloroethane                  | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Tetrachloroethene                          | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Toluene                                    | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| 1,1,1-Trichloroethane                      | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| 1,1,2-Trichloroethane                      | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Trichloroethene                            | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Vinyl chloride                             | ND                  | 0.005 |           | mg/Kg                       | 1  | 8/24/2012           |
| Xylenes, Total                             | ND                  | 0.015 |           | mg/Kg                       | 1  | 8/24/2012           |

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** August 28, 2012**Date Printed:** August 28, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080686-016

**Client Sample ID:** Trip Blank  
**Collection Date**  
**Matrix:** Trip Blank

| Analyses                                   | Result | RL    | Qualifier | Units | DF | Date Analyzed |
|--|--------|-------|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |        |       |           |       |    |               |
| Acetone                                    | ND     | 0.02  |           | mg/L  | 1  | 8/23/2012     |
| Benzene                                    | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Bromodichloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Bromoform                                  | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Bromomethane                               | ND     | 0.01  |           | mg/L  | 1  | 8/23/2012     |
| 2-Butanone                                 | ND     | 0.02  |           | mg/L  | 1  | 8/23/2012     |
| Carbon disulfide                           | ND     | 0.01  |           | mg/L  | 1  | 8/23/2012     |
| Carbon tetrachloride                       | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Chlorobenzene                              | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Chloroethane                               | ND     | 0.01  |           | mg/L  | 1  | 8/23/2012     |
| Chloroform                                 | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Chloromethane                              | ND     | 0.01  |           | mg/L  | 1  | 8/23/2012     |
| Dibromochloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| 1,1-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| 1,2-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| 1,1-Dichloroethene                         | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| cis-1,2-Dichloroethene                     | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| trans-1,2-Dichloroethene                   | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| 1,2-Dichloropropane                        | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| cis-1,3-Dichloropropene                    | ND     | 0.001 |           | mg/L  | 1  | 8/23/2012     |
| trans-1,3-Dichloropropene                  | ND     | 0.001 |           | mg/L  | 1  | 8/23/2012     |
| Ethylbenzene                               | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| 2-Hexanone                                 | ND     | 0.02  |           | mg/L  | 1  | 8/23/2012     |
| 4-Methyl-2-pentanone                       | ND     | 0.02  |           | mg/L  | 1  | 8/23/2012     |
| Methylene chloride                         | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Methyl tert-butyl ether                    | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Styrene                                    | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Tetrachloroethene                          | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Toluene                                    | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| 1,1,1-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| 1,1,2-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Trichloroethene                            | ND     | 0.005 |           | mg/L  | 1  | 8/23/2012     |
| Vinyl chloride                             | ND     | 0.002 |           | mg/L  | 1  | 8/23/2012     |
| Xylenes, Total                             | ND     | 0.015 |           | mg/L  | 1  | 8/23/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

### CHAIN OF CUSTODY RECORD

No. 844732 Page: 1 of 1

| Company:  | Project Number:         | Client Tracking No.:     | P.O. No.:               |                          |                         |                          |                         |                          |                         |
|---|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|
| Project Name: Doe - Umball  |                         |                          | Quote No.:              |                          |                         |                          |                         |                          |                         |
| Project Location: Chicago, IL   |                         |                          |                         |                          |                         |                          |                         |                          |                         |
| Sampler(s): Tom Tucker  |                         |                          |                         |                          |                         |                          |                         |                          |                         |
| Report To: Tom Tucker   | Phone: 312-575-6114     |                          | Turn Around: 3 - Day    |                          |                         |                          |                         |                          |                         |
| QC Level: 1 2 3   | Fax: 312-575-6111       |                          |                         |                          |                         |                          |                         |                          |                         |
| Client Sample Number/Description:   | Date Taken              | Time Taken               | Matrix                  | Comp.                    | Grab                    | Preserv.                 | No. of Containers       | Remarks                  | Lab No.:                |
| TB-01-5-7   | 7-2-12                  | 14:00                    | S                       | F                        | 3                       | X                        |                         | Hold                     | 001                     |
| TB-01-23-25   | 11:10                   | S                        | F                       | 3                        | X                       |                          |                         | Hold                     | 002                     |
| TB-01-24-24   | 11:20                   | S                        | F                       | 3                        | X                       |                          |                         | Hold                     | 003                     |
| TB-02-13-15   | 15:00                   | S                        | F                       | 3                        | X                       |                          |                         | Hold                     | 004                     |
| TB-02-Qmp   | 15:00                   | S                        | F                       | 3                        | X                       |                          |                         | Hold                     | 005                     |
| TB-02-17-19   | 15:15                   | S                        | F                       | 3                        | X                       |                          |                         | Hold                     | 006                     |
| TB-03-23-25   | 7-21-12                 | 01:00                    | S                       | F                        | 3                       | X                        |                         | MS/MSD                   | 007                     |
| TB-03-24-29   | 01:10                   | S                        | F                       | 3                        | X                       |                          |                         | Hold                     | 008                     |
| TB-04-24-30   | 11:30                   | S                        | F                       | 3                        | X                       |                          |                         | Hold                     | 009                     |
| TB-04-32-34   | 10:10                   | S                        | F                       | 3                        | X                       |                          |                         | Hold                     | 010                     |
| TB-05-15-17   | 11:00                   | S                        | A                       | 3                        | X                       |                          |                         | MS/MSD                   | 011                     |
| TB-05-09-09   | 11:00                   | S                        | A                       | 1                        | X                       |                          |                         | Hold                     | 012                     |
| TB-05-18-21   | 11:15                   | S                        | A                       | 1                        | X                       |                          |                         | Hold                     | 013                     |
| Relinquished by: (Signature) <u>Trice</u> Date/Time: 9-1-12 12:36 Comments: 3 - Day TAT   |                         |                          |                         |                          |                         |                          |                         |                          |                         |
| Received by: (Signature)  | Date/Time: 9/2/12 13:30 | Received by: (Signature) | Date/Time: 9/2/12 13:30 | Received by: (Signature) | Date/Time: 9/2/12 13:30 | Received by: (Signature) | Date/Time: 9/2/12 13:30 | Received by: (Signature) | Date/Time: 9/2/12 13:30 |
| Preservation Code: A = None    B = HNO <sub>3</sub> C = NaOH<br>D = H <sub>2</sub> SO <sub>4</sub> E = HCl    F = 50:35/EnCore    G = Other<br>Temperature: 32 °C |                         |                          |                         |                          |                         |                          |                         |                          |                         |

# STAT Analysis Corporation

## Sample Receipt Checklist

Client Name TERRACON

Date and Time Received: 8/21/2012 1:30:00 PM

Work Order Number 12080686

Received by: MAM

Checklist completed by:

 Signature

8-21-12 Date

Reviewed by:

 Initials

8/21/12 Date

Matrix:

Carrier name Client Delivered

Shipping container/cooler in good condition? Yes  No  Not Present

Custody seals intact on shipping container/cooler? Yes  No  Not Present

Custody seals intact on sample bottles? Yes  No  Not Present

Chain of custody present? Yes  No

Chain of custody signed when relinquished and received? Yes  No

Chain of custody agrees with sample labels/containers? Yes  No

Samples in proper container/bottle? Yes  No

Sample containers intact? Yes  No

Sufficient sample volume for indicated test? Yes  No

All samples received within holding time? Yes  No

Container or Temp Blank temperature in compliance? Yes  No  Temperature 3.2 °C

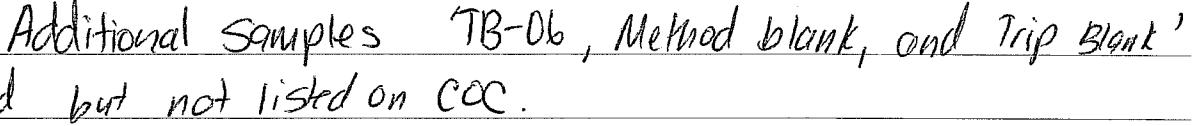
Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No

Water - Samples pH checked? Yes  No  Checked by: \_\_\_\_\_

Water - Samples properly preserved? Yes  No  pH Adjusted? \_\_\_\_\_

Any No response must be detailed in the comments section below.

Comments:

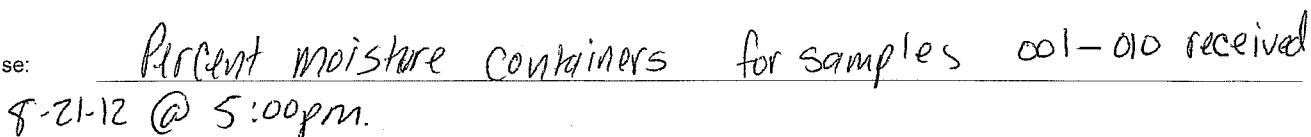


Client / Person contacted: \_\_\_\_\_

Date contacted: \_\_\_\_\_

Contacted by: \_\_\_\_\_

Response:



**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Test No:** SW5035/8260B      **Matrix:** S

## QC SUMMARY REPORT SURROGATE RECOVERIES

| Sample ID        | BR4FBZ | BZMED8 | DBFM  | DCA12D4 |  |  |  |  |
|------------------|--------|--------|-------|---------|--|--|--|--|
| VBLK082212A-3    | 80.8   | 99.4   | 119 * | 120     |  |  |  |  |
| VLCS082212A-3    | 99.7   | 109    | 124 * | 109     |  |  |  |  |
| VLCSD082212A-3   | 98.3   | 109    | 119 * | 109     |  |  |  |  |
| 12080686-002A    | 77.0   | 96.0   | 97.3  | 113     |  |  |  |  |
| 12080686-004A    | 79.2   | 99.6   | 112   | 123     |  |  |  |  |
| 12080686-005A    | 64.9   | 94.8   | 129   | 143     |  |  |  |  |
| 12080686-007A    | 80.0   | 99.2   | 107   | 118     |  |  |  |  |
| 12080686-007AMS  | 82.1   | 102    | 142   | 144     |  |  |  |  |
| 12080686-007AMSD | 84.0   | 101    | 136   | 132     |  |  |  |  |
| 12080686-009A    | 61.0   | 89.2   | 137   | 150     |  |  |  |  |
| VBLK082312-3     | 81.8   | 97.6   | 116   | 112     |  |  |  |  |
| VLCS082312r3     | 99.4   | 107    | 119 * | 111     |  |  |  |  |
| VLCSD082312-3    | 99.4   | 107    | 118   | 111     |  |  |  |  |
| 12080686-014A    | 52.6   | 86.3   | 135   | 132     |  |  |  |  |
| VBLK082412-3     | 83.0   | 97.6   | 115   | 117     |  |  |  |  |
| VLCS082412-3     | 96.9   | 109    | 118   | 107     |  |  |  |  |
| VLCSD082412-3    | 96.3   | 108    | 121 * | 111     |  |  |  |  |
| 12080686-015A    | 82.1   | 98.5   | 122   | 131     |  |  |  |  |
| 12080686-014A:50 | 81.4   | 97.6   | 116   | 115     |  |  |  |  |

| Acronym | Surrogate               | QC Limits |
|---------|-------------------------|-----------|
| BR4FBZ  | = 4-Bromofluorobenzene  | 63-110    |
| BR4FBZ  | = 4-Bromofluorobenzene  | 44-114    |
| BZMED8  | = Toluene-d8            | 85-110    |
| BZMED8  | = Toluene-d8            | 62-122    |
| DBFM    | = Dibromofluoromethane  | 83-119    |
| DBFM    | = Dibromofluoromethane  | 74-150    |
| DCA12D4 | = 1,2-Dichloroethane-d4 | 84-129    |
| DCA12D4 | = 1,2-Dichloroethane-d4 | 78-160    |

\* Surrogate recovery outside acceptance limits

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82756

| Sample ID: VBLK082312-3   | SampType: MBLK   | TestCode: VOC_ENCOR | Units: mg/Kg | Prep Date:               | Run ID: VOA-3_120823A |          |           |             |      |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82756 | TestNo: SW5035/8260 |              | Analysis Date: 8/23/2012 | SeqNo: 2226089        |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC                  | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| 2-Butanone                | ND               | 0.075               |              |                          |                       |          |           |             |      |          |      |
| 2-Hexanone                | ND               | 0.020               |              |                          |                       |          |           |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 0.020               |              |                          |                       |          |           |             |      |          |      |
| Acetone                   | 0.00272          | 0.075               |              |                          |                       |          |           |             |      |          | J    |
| Benzene                   | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| Bromodichloromethane      | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| Bromoform                 | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| Bromomethane              | ND               | 0.010               |              |                          |                       |          |           |             |      |          |      |
| Carbon disulfide          | ND               | 0.050               |              |                          |                       |          |           |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| Chlorobenzene             | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| Chloroethane              | ND               | 0.010               |              |                          |                       |          |           |             |      |          |      |
| Chloroform                | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| Chloromethane             | ND               | 0.010               |              |                          |                       |          |           |             |      |          |      |
| cis-1,2-Dichloroethene    | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| cis-1,3-Dichloropropene   | ND               | 0.0020              |              |                          |                       |          |           |             |      |          |      |
| Dibromochloromethane      | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| Ethylbenzene              | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| Methylene chloride        | 0.002            | 0.010               |              |                          |                       |          |           |             |      |          | J    |
| Styrene                   | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |
| Tetrachloroethene         | 0.00118          | 0.0050              |              |                          |                       |          |           |             |      |          | J    |
| Toluene                   | ND               | 0.0050              |              |                          |                       |          |           |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82756**

| Sample ID: <b>VBLK082312-3</b> | SampType: <b>MBLK</b>   | TestCode: <b>VOC_ENCODR</b> | Units: <b>mg/Kg</b> | Prep Date:                      |      |          |           | Run ID: <b>VOA-3_120823A</b> |      |          |      |
|--------------------------------|-------------------------|-----------------------------|---------------------|---------------------------------|------|----------|-----------|------------------------------|------|----------|------|
| Client ID: <b>zzzzz</b>        | Batch ID: <b>R82756</b> | TestNo: <b>SW5035/8260</b>  |                     | Analysis Date: <b>8/23/2012</b> |      |          |           | SeqNo: <b>2226089</b>        |      |          |      |
| Analyte                        | Result                  | PQL                         | SPK value           | SPK Ref Val                     | %REC | LowLimit | HighLimit | RPD Ref Val                  | %RPD | RPDLimit | Qual |
| trans-1,2-Dichloroethene       | ND                      | 0.0050                      |                     |                                 |      |          |           |                              |      |          |      |
| trans-1,3-Dichloropropene      | ND                      | 0.0020                      |                     |                                 |      |          |           |                              |      |          |      |
| Trichloroethene                | ND                      | 0.0050                      |                     |                                 |      |          |           |                              |      |          |      |
| Vinyl chloride                 | ND                      | 0.0050                      |                     |                                 |      |          |           |                              |      |          |      |
| Xylenes, Total                 | ND                      | 0.015                       |                     |                                 |      |          |           |                              |      |          |      |
| Sample ID: <b>VLCS082312r3</b> | SampType: <b>LCS</b>    | TestCode: <b>VOC_ENCODR</b> | Units: <b>mg/Kg</b> | Prep Date:                      |      |          |           | Run ID: <b>VOA-3_120823A</b> |      |          |      |
| Client ID: <b>zzzzz</b>        | Batch ID: <b>R82756</b> | TestNo: <b>SW5035/8260</b>  |                     | Analysis Date: <b>8/23/2012</b> |      |          |           | SeqNo: <b>2226090</b>        |      |          |      |
| Analyte                        | Result                  | PQL                         | SPK value           | SPK Ref Val                     | %REC | LowLimit | HighLimit | RPD Ref Val                  | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane          | 0.05246                 | 0.0050                      | 0.05                | 0                               | 105  | 70       | 130       | 0                            | 0    | 0        |      |
| 1,1,2,2-Tetrachloroethane      | 0.05864                 | 0.0050                      | 0.05                | 0                               | 117  | 70       | 130       | 0                            | 0    | 0        |      |
| 1,1,2-Trichloroethane          | 0.05394                 | 0.0050                      | 0.05                | 0                               | 108  | 70       | 130       | 0                            | 0    | 0        |      |
| 1,1-Dichloroethane             | 0.05182                 | 0.0050                      | 0.05                | 0                               | 104  | 70       | 130       | 0                            | 0    | 0        |      |
| 1,1-Dichloroethene             | 0.05131                 | 0.0050                      | 0.05                | 0                               | 103  | 70       | 130       | 0                            | 0    | 0        |      |
| 1,2-Dichloroethane             | 0.05935                 | 0.0050                      | 0.05                | 0                               | 119  | 70       | 130       | 0                            | 0    | 0        |      |
| 1,2-Dichloropropane            | 0.04941                 | 0.0050                      | 0.05                | 0                               | 98.8 | 70       | 130       | 0                            | 0    | 0        |      |
| 2-Butanone                     | 0.1024                  | 0.075                       | 0.1                 | 0                               | 102  | 70       | 130       | 0                            | 0    | 0        |      |
| 2-Hexanone                     | 0.1064                  | 0.020                       | 0.1                 | 0                               | 106  | 70       | 130       | 0                            | 0    | 0        |      |
| 4-Methyl-2-pentanone           | 0.1033                  | 0.020                       | 0.1                 | 0                               | 103  | 70       | 130       | 0                            | 0    | 0        |      |
| Acetone                        | 0.1203                  | 0.075                       | 0.1                 | 0.00272                         | 118  | 50       | 150       | 0                            | 0    | 0        |      |
| Benzene                        | 0.04787                 | 0.0050                      | 0.05                | 0                               | 95.7 | 70       | 130       | 0                            | 0    | 0        |      |
| Bromodichloromethane           | 0.05788                 | 0.0050                      | 0.05                | 0                               | 116  | 70       | 130       | 0                            | 0    | 0        |      |
| Bromoform                      | 0.05948                 | 0.0050                      | 0.05                | 0                               | 119  | 70       | 130       | 0                            | 0    | 0        |      |
| Bromomethane                   | 0.05862                 | 0.010                       | 0.05                | 0                               | 117  | 70       | 130       | 0                            | 0    | 0        |      |
| Carbon disulfide               | 0.1165                  | 0.050                       | 0.1                 | 0                               | 116  | 70       | 130       | 0                            | 0    | 0        |      |
| Carbon tetrachloride           | 0.05316                 | 0.0050                      | 0.05                | 0                               | 106  | 70       | 130       | 0                            | 0    | 0        |      |
| Chlorobenzene                  | 0.05604                 | 0.0050                      | 0.05                | 0                               | 112  | 70       | 130       | 0                            | 0    | 0        |      |
| Chloroethane                   | 0.05387                 | 0.010                       | 0.05                | 0                               | 108  | 70       | 130       | 0                            | 0    | 0        |      |
| Chloroform                     | 0.05624                 | 0.0050                      | 0.05                | 0                               | 112  | 70       | 130       | 0                            | 0    | 0        |      |
| Chloromethane                  | 0.05427                 | 0.010                       | 0.05                | 0                               | 109  | 70       | 130       | 0                            | 0    | 0        |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

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 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82756**

| Sample ID: VLCS082312r3   | SampType: LCS    | TestCode: VOC_ENCOD | Units: mg/Kg | Prep Date:               |      |          |           | Run ID: VOA-3_120823A |      |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82756 | TestNo: SW5035/8260 |              | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2226090        |      |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| cis-1,2-Dichloroethene    | 0.0491           | 0.0050              | 0.05         | 0                        | 98.2 | 70       | 130       | 0                     | 0    | 0        |      |
| cis-1,3-Dichloropropene   | 0.05178          | 0.0020              | 0.05         | 0                        | 104  | 70       | 130       | 0                     | 0    | 0        |      |
| Dibromochloromethane      | 0.06015          | 0.0050              | 0.05         | 0                        | 120  | 70       | 130       | 0                     | 0    | 0        |      |
| Ethylbenzene              | 0.05173          | 0.0050              | 0.05         | 0                        | 103  | 70       | 130       | 0                     | 0    | 0        |      |
| Methyl tert-butyl ether   | 0.0563           | 0.0050              | 0.05         | 0                        | 113  | 70       | 130       | 0                     | 0    | 0        |      |
| Methylene chloride        | 0.05956          | 0.010               | 0.05         | 0.002                    | 115  | 70       | 130       | 0                     | 0    | 0        |      |
| Styrene                   | 0.0542           | 0.0050              | 0.05         | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrachloroethene         | 0.04677          | 0.0050              | 0.05         | 0.00118                  | 91.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Toluene                   | 0.0477           | 0.0050              | 0.05         | 0                        | 95.4 | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,2-Dichloroethene  | 0.05377          | 0.0050              | 0.05         | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,3-Dichloropropene | 0.062            | 0.0020              | 0.05         | 0                        | 124  | 70       | 130       | 0                     | 0    | 0        |      |
| Trichloroethene           | 0.04652          | 0.0050              | 0.05         | 0                        | 93   | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl chloride            | 0.05087          | 0.0050              | 0.05         | 0                        | 102  | 70       | 130       | 0                     | 0    | 0        |      |
| Xylenes, Total            | 0.1621           | 0.015               | 0.15         | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |

| Sample ID: VLCSD082312-3  | SampType: LCSD   | TestCode: VOC_ENCOD | Units: mg/Kg | Prep Date:               |      |          |           | Run ID: VOA-3_120823A |       |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82756 | TestNo: SW5035/8260 |              | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2226091        |       |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 0.05877          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130       | 0.05246               | 11.3  | 20       |      |
| 1,1,2,2-Tetrachloroethane | 0.05913          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130       | 0.05864               | 0.832 | 20       |      |
| 1,1,2-Trichloroethane     | 0.0554           | 0.0050              | 0.05         | 0                        | 111  | 70       | 130       | 0.05394               | 2.67  | 20       |      |
| 1,1-Dichloroethane        | 0.05458          | 0.0050              | 0.05         | 0                        | 109  | 70       | 130       | 0.05182               | 5.19  | 20       |      |
| 1,1-Dichloroethene        | 0.05838          | 0.0050              | 0.05         | 0                        | 117  | 70       | 130       | 0.05131               | 12.9  | 20       |      |
| 1,2-Dichloroethane        | 0.06087          | 0.0050              | 0.05         | 0                        | 122  | 70       | 130       | 0.05935               | 2.53  | 20       |      |
| 1,2-Dichloropropane       | 0.05074          | 0.0050              | 0.05         | 0                        | 101  | 70       | 130       | 0.04941               | 2.66  | 20       |      |
| 2-Butanone                | 0.09976          | 0.075               | 0.1          | 0                        | 99.8 | 70       | 130       | 0.1024                | 2.56  | 20       |      |
| 2-Hexanone                | 0.107            | 0.020               | 0.1          | 0                        | 107  | 70       | 130       | 0.1064                | 0.581 | 20       |      |
| 4-Methyl-2-pentanone      | 0.1045           | 0.020               | 0.1          | 0                        | 104  | 70       | 130       | 0.1033                | 1.14  | 20       |      |
| Acetone                   | 0.1257           | 0.075               | 0.1          | 0.00272                  | 123  | 50       | 150       | 0.1203                | 4.45  | 20       |      |
| Benzene                   | 0.05109          | 0.0050              | 0.05         | 0                        | 102  | 70       | 130       | 0.04787               | 6.51  | 20       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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 \* - Non Accredited Parameter

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 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82756**

| Sample ID: VLCSD082312-3  | SampType: LCSD   | TestCode: VOC_ENCOR | Units: mg/Kg | Prep Date:               |      |          |           | Run ID: VOA-3_120823A |        |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------|-----------------------|--------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82756 | TestNo: SW5035/8260 |              | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2226091        |        |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD   | RPDLimit | Qual |
| Bromodichloromethane      | 0.05902          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130       | 0.05788               | 1.95   | 20       |      |
| Bromoform                 | 0.05983          | 0.0050              | 0.05         | 0                        | 120  | 70       | 130       | 0.05948               | 0.587  | 20       |      |
| Bromomethane              | 0.06214          | 0.010               | 0.05         | 0                        | 124  | 70       | 130       | 0.05862               | 5.83   | 20       |      |
| Carbon disulfide          | 0.1293           | 0.050               | 0.1          | 0                        | 129  | 70       | 130       | 0.1165                | 10.4   | 20       |      |
| Carbon tetrachloride      | 0.05868          | 0.0050              | 0.05         | 0                        | 117  | 70       | 130       | 0.05316               | 9.87   | 20       |      |
| Chlorobenzene             | 0.058            | 0.0050              | 0.05         | 0                        | 116  | 70       | 130       | 0.05604               | 3.44   | 20       |      |
| Chloroethane              | 0.06015          | 0.010               | 0.05         | 0                        | 120  | 70       | 130       | 0.05387               | 11.0   | 20       |      |
| Chloroform                | 0.05892          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130       | 0.05624               | 4.65   | 20       |      |
| Chloromethane             | 0.05778          | 0.010               | 0.05         | 0                        | 116  | 70       | 130       | 0.05427               | 6.27   | 20       |      |
| cis-1,2-Dichloroethene    | 0.05172          | 0.0050              | 0.05         | 0                        | 103  | 70       | 130       | 0.0491                | 5.20   | 20       |      |
| cis-1,3-Dichloropropene   | 0.05247          | 0.0020              | 0.05         | 0                        | 105  | 70       | 130       | 0.05178               | 1.32   | 20       |      |
| Dibromochloromethane      | 0.06013          | 0.0050              | 0.05         | 0                        | 120  | 70       | 130       | 0.06015               | 0.0333 | 20       |      |
| Ethylbenzene              | 0.05515          | 0.0050              | 0.05         | 0                        | 110  | 70       | 130       | 0.05173               | 6.40   | 20       |      |
| Methyl tert-butyl ether   | 0.05604          | 0.0050              | 0.05         | 0                        | 112  | 70       | 130       | 0.0563                | 0.463  | 20       |      |
| Methylene chloride        | 0.05935          | 0.010               | 0.05         | 0.002                    | 115  | 70       | 130       | 0.05956               | 0.353  | 20       |      |
| Styrene                   | 0.05651          | 0.0050              | 0.05         | 0                        | 113  | 70       | 130       | 0.0542                | 4.17   | 20       |      |
| Tetrachloroethene         | 0.05085          | 0.0050              | 0.05         | 0.00118                  | 99.3 | 70       | 130       | 0.04677               | 8.36   | 20       |      |
| Toluene                   | 0.05115          | 0.0050              | 0.05         | 0                        | 102  | 70       | 130       | 0.0477                | 6.98   | 20       |      |
| trans-1,2-Dichloroethene  | 0.05748          | 0.0050              | 0.05         | 0                        | 115  | 70       | 130       | 0.05377               | 6.67   | 20       |      |
| trans-1,3-Dichloropropene | 0.06352          | 0.0020              | 0.05         | 0                        | 127  | 70       | 130       | 0.062                 | 2.42   | 20       |      |
| Trichloroethene           | 0.05091          | 0.0050              | 0.05         | 0                        | 102  | 70       | 130       | 0.04652               | 9.01   | 20       |      |
| Vinyl chloride            | 0.05922          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130       | 0.05087               | 15.2   | 20       |      |
| Xylenes, Total            | 0.1736           | 0.015               | 0.15         | 0                        | 116  | 70       | 130       | 0.1621                | 6.86   | 20       |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82762

| Sample ID: VBLK082312-7   | SampType: MBLK   | TestCode: VOC_W+ | Units: mg/L | Prep Date:               | Run ID: VOA-7_120823A |          |           |             |      |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82762 | TestNo: SW8260B  |             | Analysis Date: 8/23/2012 | SeqNo: 2226273        |          |           |             |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC                  | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 2-Butanone                | ND               | 0.020            |             |                          |                       |          |           |             |      |          |      |
| 2-Hexanone                | ND               | 0.020            |             |                          |                       |          |           |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 0.020            |             |                          |                       |          |           |             |      |          |      |
| Acetone                   | ND               | 0.020            |             |                          |                       |          |           |             |      |          |      |
| Benzene                   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Bromodichloromethane      | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Bromoform                 | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Bromomethane              | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| Carbon disulfide          | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Chlorobenzene             | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Chloroethane              | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| Chloroform                | 0.0005           | 0.0050           |             |                          |                       |          |           |             |      |          | J    |
| Chloromethane             | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| cis-1,2-Dichloroethene    | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| cis-1,3-Dichloropropene   | ND               | 0.0010           |             |                          |                       |          |           |             |      |          |      |
| Dibromochloromethane      | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Ethylbenzene              | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Methylene chloride        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Styrene                   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Tetrachloroethene         | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Toluene                   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82762**

| Sample ID: VBLK082312-7   | SampType: MBLK   | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          | Run ID: VOA-7_120823A |             |      |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82762 | TestNo: SW8260B  |             | Analysis Date: 8/23/2012 |      |          | SeqNo: 2226273        |             |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| trans-1,3-Dichloropropene | ND               | 0.0010           |             |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 0.0050           |             |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.0020           |             |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 0.015            |             |                          |      |          |                       |             |      |          |      |
| Sample ID: VLCS082312-7   | SampType: LCS    | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          | Run ID: VOA-7_120823A |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R82762 | TestNo: SW8260B  |             | Analysis Date: 8/23/2012 |      |          | SeqNo: 2226275        |             |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 0.02182          | 0.0050           | 0.02        | 0                        | 109  | 70       | 130                   | 0           | 0    |          |      |
| 1,1,2,2-Tetrachloroethane | 0.02056          | 0.0050           | 0.02        | 0                        | 103  | 70       | 130                   | 0           | 0    |          |      |
| 1,1,2-Trichloroethane     | 0.02013          | 0.0050           | 0.02        | 0                        | 101  | 70       | 130                   | 0           | 0    |          |      |
| 1,1-Dichloroethane        | 0.02027          | 0.0050           | 0.02        | 0                        | 101  | 70       | 130                   | 0           | 0    |          |      |
| 1,1-Dichloroethene        | 0.02083          | 0.0050           | 0.02        | 0                        | 104  | 70       | 130                   | 0           | 0    |          |      |
| 1,2-Dichloroethane        | 0.02099          | 0.0050           | 0.02        | 0                        | 105  | 70       | 130                   | 0           | 0    |          |      |
| 1,2-Dichloropropane       | 0.02034          | 0.0050           | 0.02        | 0                        | 102  | 70       | 130                   | 0           | 0    |          |      |
| 2-Butanone                | 0.04014          | 0.020            | 0.04        | 0                        | 100  | 70       | 130                   | 0           | 0    |          |      |
| 2-Hexanone                | 0.03936          | 0.020            | 0.04        | 0                        | 98.4 | 70       | 130                   | 0           | 0    |          |      |
| 4-Methyl-2-pentanone      | 0.03805          | 0.020            | 0.04        | 0                        | 95.1 | 70       | 130                   | 0           | 0    |          |      |
| Acetone                   | 0.03386          | 0.020            | 0.04        | 0                        | 84.6 | 50       | 150                   | 0           | 0    |          |      |
| Benzene                   | 0.02191          | 0.0050           | 0.02        | 0                        | 110  | 70       | 130                   | 0           | 0    |          |      |
| Bromodichloromethane      | 0.02166          | 0.0050           | 0.02        | 0                        | 108  | 70       | 130                   | 0           | 0    |          |      |
| Bromoform                 | 0.01884          | 0.0050           | 0.02        | 0                        | 94.2 | 70       | 130                   | 0           | 0    |          |      |
| Bromomethane              | 0.01381          | 0.010            | 0.02        | 0                        | 69   | 70       | 130                   | 0           | 0    |          | S    |
| Carbon disulfide          | 0.0427           | 0.010            | 0.04        | 0                        | 107  | 70       | 130                   | 0           | 0    |          |      |
| Carbon tetrachloride      | 0.02187          | 0.0050           | 0.02        | 0                        | 109  | 70       | 130                   | 0           | 0    |          |      |
| Chlorobenzene             | 0.02432          | 0.0050           | 0.02        | 0                        | 122  | 70       | 130                   | 0           | 0    |          |      |
| Chloroethane              | 0.01992          | 0.010            | 0.02        | 0                        | 99.6 | 70       | 130                   | 0           | 0    |          |      |
| Chloroform                | 0.02243          | 0.0050           | 0.02        | 0.0005                   | 110  | 70       | 130                   | 0           | 0    |          |      |
| Chloromethane             | 0.02125          | 0.010            | 0.02        | 0                        | 106  | 70       | 130                   | 0           | 0    |          |      |
| cis-1,2-Dichloroethene    | 0.02042          | 0.0050           | 0.02        | 0                        | 102  | 70       | 130                   | 0           | 0    |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

|                    |                                       |                                     |  |  |  |  |  |  |  |  |  |
|--------------------|---------------------------------------|-------------------------------------|--|--|--|--|--|--|--|--|--|
| <b>CLIENT:</b>     | Terracon Consultants, Inc.            | <b>ANALYTICAL QC SUMMARY REPORT</b> |  |  |  |  |  |  |  |  |  |
| <b>Work Order:</b> | 12080686                              |                                     |  |  |  |  |  |  |  |  |  |
| <b>Project:</b>    | A2107017-7A, DOE-Kimball, Chicago, IL | <b>BatchID: R82762</b>              |  |  |  |  |  |  |  |  |  |

| Sample ID: VLCS082312-7   | SampType: LCS    | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          |           | Run ID: VOA-7_120823A |      |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82762 | TestNo: SW8260B  |             | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2226275        |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| cis-1,3-Dichloropropene   | 0.02123          | 0.0010           | 0.02        | 0                        | 106  | 70       | 130       | 0                     | 0    | 0        |      |
| Dibromochloromethane      | 0.02182          | 0.0050           | 0.02        | 0                        | 109  | 70       | 130       | 0                     | 0    | 0        |      |
| Ethylbenzene              | 0.02204          | 0.0050           | 0.02        | 0                        | 110  | 70       | 130       | 0                     | 0    | 0        |      |
| Methyl tert-butyl ether   | 0.02047          | 0.0050           | 0.02        | 0                        | 102  | 50       | 150       | 0                     | 0    | 0        |      |
| Methylene chloride        | 0.0208           | 0.0050           | 0.02        | 0                        | 104  | 70       | 130       | 0                     | 0    | 0        |      |
| Styrene                   | 0.02094          | 0.0050           | 0.02        | 0                        | 105  | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrachloroethene         | 0.02171          | 0.0050           | 0.02        | 0                        | 109  | 70       | 130       | 0                     | 0    | 0        |      |
| Toluene                   | 0.02168          | 0.0050           | 0.02        | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,2-Dichloroethene  | 0.02066          | 0.0050           | 0.02        | 0                        | 103  | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,3-Dichloropropene | 0.02183          | 0.0010           | 0.02        | 0                        | 109  | 70       | 130       | 0                     | 0    | 0        |      |
| Trichloroethene           | 0.0217           | 0.0050           | 0.02        | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl chloride            | 0.01997          | 0.0020           | 0.02        | 0                        | 99.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Xylenes, Total            | 0.07012          | 0.015            | 0.06        | 0                        | 117  | 70       | 130       | 0                     | 0    | 0        |      |

| Sample ID: VLCSD082312-7  | SampType: LCSD   | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          |           | Run ID: VOA-7_120823A |       |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82762 | TestNo: SW8260B  |             | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2226276        |       |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 0.02094          | 0.0050           | 0.02        | 0                        | 105  | 70       | 130       | 0.02182               | 4.12  | 20       |      |
| 1,1,2,2-Tetrachloroethane | 0.01966          | 0.0050           | 0.02        | 0                        | 98.3 | 70       | 130       | 0.02056               | 4.48  | 20       |      |
| 1,1,2-Trichloroethane     | 0.01986          | 0.0050           | 0.02        | 0                        | 99.3 | 70       | 130       | 0.02013               | 1.35  | 20       |      |
| 1,1-Dichloroethane        | 0.01972          | 0.0050           | 0.02        | 0                        | 98.6 | 70       | 130       | 0.02027               | 2.75  | 20       |      |
| 1,1-Dichloroethene        | 0.02037          | 0.0050           | 0.02        | 0                        | 102  | 70       | 130       | 0.02083               | 2.23  | 20       |      |
| 1,2-Dichloroethane        | 0.02091          | 0.0050           | 0.02        | 0                        | 105  | 70       | 130       | 0.02099               | 0.382 | 20       |      |
| 1,2-Dichloropropane       | 0.01975          | 0.0050           | 0.02        | 0                        | 98.8 | 70       | 130       | 0.02034               | 2.94  | 20       |      |
| 2-Butanone                | 0.04341          | 0.020            | 0.04        | 0                        | 109  | 70       | 130       | 0.04014               | 7.83  | 20       |      |
| 2-Hexanone                | 0.03696          | 0.020            | 0.04        | 0                        | 92.4 | 70       | 130       | 0.03936               | 6.29  | 20       |      |
| 4-Methyl-2-pentanone      | 0.03756          | 0.020            | 0.04        | 0                        | 93.9 | 70       | 130       | 0.03805               | 1.30  | 20       |      |
| Acetone                   | 0.03546          | 0.020            | 0.04        | 0                        | 88.7 | 50       | 150       | 0.03386               | 4.62  | 20       |      |
| Benzene                   | 0.02105          | 0.0050           | 0.02        | 0                        | 105  | 70       | 130       | 0.02191               | 4.00  | 20       |      |
| Bromodichloromethane      | 0.02033          | 0.0050           | 0.02        | 0                        | 102  | 70       | 130       | 0.02166               | 6.33  | 20       |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82762**

| Sample ID: VLCSD082312-7  | SampType: LCSD   | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          |           | Run ID: VOA-7_120823A |       |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82762 | TestNo: SW8260B  |             | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2226276        |       |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| Bromoform                 | 0.01901          | 0.0050           | 0.02        | 0                        | 95   | 70       | 130       | 0.01884               | 0.898 | 20       |      |
| Bromomethane              | 0.0143           | 0.010            | 0.02        | 0                        | 71.5 | 70       | 130       | 0.01381               | 3.49  | 20       |      |
| Carbon disulfide          | 0.04117          | 0.010            | 0.04        | 0                        | 103  | 70       | 130       | 0.0427                | 3.65  | 20       |      |
| Carbon tetrachloride      | 0.02048          | 0.0050           | 0.02        | 0                        | 102  | 70       | 130       | 0.02187               | 6.56  | 20       |      |
| Chlorobenzene             | 0.02219          | 0.0050           | 0.02        | 0                        | 111  | 70       | 130       | 0.02432               | 9.16  | 20       |      |
| Chloroethane              | 0.02074          | 0.010            | 0.02        | 0                        | 104  | 70       | 130       | 0.01992               | 4.03  | 20       |      |
| Chloroform                | 0.02175          | 0.0050           | 0.02        | 0.0005                   | 106  | 70       | 130       | 0.02243               | 3.08  | 20       |      |
| Chloromethane             | 0.02215          | 0.010            | 0.02        | 0                        | 111  | 70       | 130       | 0.02125               | 4.15  | 20       |      |
| cis-1,2-Dichloroethene    | 0.01965          | 0.0050           | 0.02        | 0                        | 98.3 | 70       | 130       | 0.02042               | 3.84  | 20       |      |
| cis-1,3-Dichloropropene   | 0.02007          | 0.0010           | 0.02        | 0                        | 100  | 70       | 130       | 0.02123               | 5.62  | 20       |      |
| Dibromochloromethane      | 0.02043          | 0.0050           | 0.02        | 0                        | 102  | 70       | 130       | 0.02182               | 6.58  | 20       |      |
| Ethylbenzene              | 0.02051          | 0.0050           | 0.02        | 0                        | 103  | 70       | 130       | 0.02204               | 7.19  | 20       |      |
| Methyl tert-butyl ether   | 0.02085          | 0.0050           | 0.02        | 0                        | 104  | 50       | 150       | 0.02047               | 1.84  | 20       |      |
| Methylene chloride        | 0.01989          | 0.0050           | 0.02        | 0                        | 99.4 | 70       | 130       | 0.0208                | 4.47  | 20       |      |
| Styrene                   | 0.02025          | 0.0050           | 0.02        | 0                        | 101  | 70       | 130       | 0.02094               | 3.35  | 20       |      |
| Tetrachloroethene         | 0.02004          | 0.0050           | 0.02        | 0                        | 100  | 70       | 130       | 0.02171               | 8.00  | 20       |      |
| Toluene                   | 0.02065          | 0.0050           | 0.02        | 0                        | 103  | 70       | 130       | 0.02168               | 4.87  | 20       |      |
| trans-1,2-Dichloroethene  | 0.02043          | 0.0050           | 0.02        | 0                        | 102  | 70       | 130       | 0.02066               | 1.12  | 20       |      |
| trans-1,3-Dichloropropene | 0.02166          | 0.0010           | 0.02        | 0                        | 108  | 70       | 130       | 0.02183               | 0.782 | 20       |      |
| Trichloroethene           | 0.01969          | 0.0050           | 0.02        | 0                        | 98.4 | 70       | 130       | 0.0217                | 9.71  | 20       |      |
| Vinyl chloride            | 0.01822          | 0.0020           | 0.02        | 0                        | 91.1 | 70       | 130       | 0.01997               | 9.16  | 20       |      |
| Xylenes, Total            | 0.06521          | 0.015            | 0.06        | 0                        | 109  | 70       | 130       | 0.07012               | 7.26  | 20       |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82763**

| Sample ID: 12080686-007AMS | SampType: MS     | TestCode: VOC_5035+ | Units: mg/Kg-dry | Prep Date: 8/21/2012     |      |          | Run ID: VOA-3_120822B |             |      |          |      |
|----------------------------|------------------|---------------------|------------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: TB-03-23-25     | Batch ID: R82763 | TestNo: SW5035/8260 |                  | Analysis Date: 8/23/2012 |      |          | SeqNo: 2226287        |             |      |          |      |
| Analyte                    | Result           | PQL                 | SPK value        | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane      | 0.04216          | 0.0045              | 0.04519          | 0                        | 93.3 | 70       | 130                   | 0           | 0    |          |      |
| 1,1,2,2-Tetrachloroethane  | 0.02947          | 0.0045              | 0.04519          | 0                        | 65.2 | 70       | 130                   | 0           | 0    |          | S    |
| 1,1,2-Trichloroethane      | 0.03217          | 0.0045              | 0.04519          | 0                        | 71.2 | 70       | 130                   | 0           | 0    |          |      |
| 1,1-Dichloroethane         | 0.04072          | 0.0045              | 0.04519          | 0                        | 90.1 | 70       | 130                   | 0           | 0    |          |      |
| 1,1-Dichloroethene         | 0.04265          | 0.0045              | 0.04519          | 0                        | 94.4 | 70       | 130                   | 0           | 0    |          |      |
| 1,2-Dichloroethane         | 0.03654          | 0.0045              | 0.04519          | 0                        | 80.9 | 70       | 130                   | 0           | 0    |          |      |
| 1,2-Dichloropropane        | 0.03189          | 0.0045              | 0.04519          | 0                        | 70.6 | 70       | 130                   | 0           | 0    |          |      |
| 2-Butanone                 | 0.09353          | 0.068               | 0.09039          | 0                        | 103  | 70       | 130                   | 0           | 0    |          |      |
| 2-Hexanone                 | 0.06399          | 0.018               | 0.09039          | 0                        | 70.8 | 70       | 130                   | 0           | 0    |          |      |
| 4-Methyl-2-pentanone       | 0.07083          | 0.018               | 0.09039          | 0                        | 78.4 | 70       | 130                   | 0           | 0    |          |      |
| Acetone                    | 0.1555           | 0.068               | 0.09039          | 0.01836                  | 152  | 50       | 150                   | 0           | 0    |          | S    |
| Benzene                    | 0.03454          | 0.0045              | 0.04519          | 0.0005774                | 75.1 | 70       | 130                   | 0           | 0    |          |      |
| Bromodichloromethane       | 0.03144          | 0.0045              | 0.04519          | 0                        | 69.6 | 70       | 130                   | 0           | 0    |          | S    |
| Bromoform                  | 0.0204           | 0.0045              | 0.04519          | 0                        | 45.1 | 70       | 130                   | 0           | 0    |          | S    |
| Bromomethane               | 0.03326          | 0.0090              | 0.04519          | 0                        | 73.6 | 70       | 130                   | 0           | 0    |          |      |
| Carbon disulfide           | 0.1045           | 0.045               | 0.09039          | 0                        | 116  | 70       | 130                   | 0           | 0    |          |      |
| Carbon tetrachloride       | 0.0409           | 0.0045              | 0.04519          | 0                        | 90.5 | 70       | 130                   | 0           | 0    |          |      |
| Chlorobenzene              | 0.03537          | 0.0045              | 0.04519          | 0                        | 78.3 | 70       | 130                   | 0           | 0    |          |      |
| Chloroethane               | 0.03999          | 0.0090              | 0.04519          | 0                        | 88.5 | 70       | 130                   | 0           | 0    |          |      |
| Chloroform                 | 0.04215          | 0.0045              | 0.04519          | 0                        | 93.3 | 70       | 130                   | 0           | 0    |          |      |
| Chloromethane              | 0.03971          | 0.0090              | 0.04519          | 0                        | 87.9 | 70       | 130                   | 0           | 0    |          |      |
| cis-1,2-Dichloroethene     | 0.03575          | 0.0045              | 0.04519          | 0                        | 79.1 | 70       | 130                   | 0           | 0    |          |      |
| cis-1,3-Dichloropropene    | 0.02473          | 0.0018              | 0.04519          | 0                        | 54.7 | 70       | 130                   | 0           | 0    |          | S    |
| Dibromochloromethane       | 0.02756          | 0.0045              | 0.04519          | 0                        | 61   | 70       | 130                   | 0           | 0    |          | S    |
| Ethylbenzene               | 0.03889          | 0.0045              | 0.04519          | 0                        | 86.1 | 70       | 130                   | 0           | 0    |          |      |
| Methyl tert-butyl ether    | 0.04641          | 0.0045              | 0.04519          | 0                        | 103  | 70       | 130                   | 0           | 0    |          |      |
| Methylene chloride         | 0.04421          | 0.0090              | 0.04519          | 0                        | 97.8 | 70       | 130                   | 0           | 0    |          |      |
| Styrene                    | 0.03025          | 0.0045              | 0.04519          | 0                        | 66.9 | 70       | 130                   | 0           | 0    |          | S    |
| Tetrachloroethene          | 0.03898          | 0.0045              | 0.04519          | 0                        | 86.2 | 70       | 130                   | 0           | 0    |          |      |
| Toluene                    | 0.03233          | 0.0045              | 0.04519          | 0.0004352                | 70.6 | 70       | 130                   | 0           | 0    |          |      |
| trans-1,2-Dichloroethene   | 0.04499          | 0.0045              | 0.04519          | 0                        | 99.5 | 70       | 130                   | 0           | 0    |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82763**

| Sample ID: 12080686-007AMS  | SampType: MS     | TestCode: VOC_5035+ | Units: mg/Kg-dry | Prep Date: 8/21/2012     | Run ID: VOA-3_120822B |          |           |             |       |          |      |
|-----------------------------|------------------|---------------------|------------------|--------------------------|-----------------------|----------|-----------|-------------|-------|----------|------|
| Client ID: TB-03-23-25      | Batch ID: R82763 | TestNo: SW5035/8260 |                  | Analysis Date: 8/23/2012 | SeqNo: 2226287        |          |           |             |       |          |      |
| <hr/>                       |                  |                     |                  |                          |                       |          |           |             |       |          |      |
| Analyte                     | Result           | PQL                 | SPK value        | SPK Ref Val              | %REC                  | LowLimit | HighLimit | RPD Ref Val | %RPD  | RPDLimit | Qual |
| trans-1,3-Dichloropropene   | 0.03014          | 0.0018              | 0.04519          | 0                        | 66.7                  | 70       | 130       | 0           | 0     | 0        | S    |
| Trichloroethene             | 0.03443          | 0.0045              | 0.04519          | 0.0004268                | 75.2                  | 70       | 130       | 0           | 0     | 0        |      |
| Vinyl chloride              | 0.04144          | 0.0045              | 0.04519          | 0                        | 91.7                  | 70       | 130       | 0           | 0     | 0        |      |
| Xylenes, Total              | 0.1204           | 0.014               | 0.1356           | 0                        | 88.8                  | 70       | 130       | 0           | 0     | 0        |      |
| <hr/>                       |                  |                     |                  |                          |                       |          |           |             |       |          |      |
| Sample ID: 12080686-007AMSD | SampType: MSD    | TestCode: VOC_5035+ | Units: mg/Kg-dry | Prep Date: 8/21/2012     | Run ID: VOA-3_120822B |          |           |             |       |          |      |
| Client ID: TB-03-23-25      | Batch ID: R82763 | TestNo: SW5035/8260 |                  | Analysis Date: 8/23/2012 | SeqNo: 2226289        |          |           |             |       |          |      |
| Analyte                     | Result           | PQL                 | SPK value        | SPK Ref Val              | %REC                  | LowLimit | HighLimit | RPD Ref Val | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane       | 0.04238          | 0.0046              | 0.04611          | 0                        | 91.9                  | 70       | 130       | 0.04216     | 0.521 | 25       |      |
| 1,1,2,2-Tetrachloroethane   | 0.024            | 0.0046              | 0.04611          | 0                        | 52                    | 70       | 130       | 0.02947     | 20.5  | 25       | S    |
| 1,1,2-Trichloroethane       | 0.02948          | 0.0046              | 0.04611          | 0                        | 63.9                  | 70       | 130       | 0.03217     | 8.71  | 25       | S    |
| 1,1-Dichloroethane          | 0.03831          | 0.0046              | 0.04611          | 0                        | 83.1                  | 70       | 130       | 0.04072     | 6.10  | 25       |      |
| 1,1-Dichloroethene          | 0.04506          | 0.0046              | 0.04611          | 0                        | 97.7                  | 70       | 130       | 0.04265     | 5.51  | 25       |      |
| 1,2-Dichloroethane          | 0.03391          | 0.0046              | 0.04611          | 0                        | 73.5                  | 70       | 130       | 0.03654     | 7.47  | 25       |      |
| 1,2-Dichloropropane         | 0.02983          | 0.0046              | 0.04611          | 0                        | 64.7                  | 70       | 130       | 0.03189     | 6.69  | 25       | S    |
| 2-Butanone                  | 0.08321          | 0.069               | 0.09223          | 0                        | 90.2                  | 70       | 130       | 0.09353     | 11.7  | 25       |      |
| 2-Hexanone                  | 0.05085          | 0.018               | 0.09223          | 0                        | 55.1                  | 70       | 130       | 0.06399     | 22.9  | 25       | S    |
| 4-Methyl-2-pentanone        | 0.05675          | 0.018               | 0.09223          | 0                        | 61.5                  | 70       | 130       | 0.07083     | 22.1  | 25       | S    |
| Acetone                     | 0.13             | 0.069               | 0.09223          | 0.01836                  | 121                   | 50       | 150       | 0.1555      | 17.9  | 25       |      |
| Benzene                     | 0.03398          | 0.0046              | 0.04611          | 0.0005774                | 72.4                  | 70       | 130       | 0.03454     | 1.64  | 25       |      |
| Bromodichloromethane        | 0.0289           | 0.0046              | 0.04611          | 0                        | 62.7                  | 70       | 130       | 0.03144     | 8.40  | 25       | S    |
| Bromoform                   | 0.01647          | 0.0046              | 0.04611          | 0                        | 35.7                  | 70       | 130       | 0.0204      | 21.3  | 25       | S    |
| Bromomethane                | 0.03104          | 0.0092              | 0.04611          | 0                        | 67.3                  | 70       | 130       | 0.03326     | 6.90  | 25       | S    |
| Carbon disulfide            | 0.1014           | 0.046               | 0.09223          | 0                        | 110                   | 70       | 130       | 0.1045      | 3.00  | 25       |      |
| Carbon tetrachloride        | 0.04155          | 0.0046              | 0.04611          | 0                        | 90.1                  | 70       | 130       | 0.0409      | 1.57  | 25       |      |
| Chlorobenzene               | 0.03263          | 0.0046              | 0.04611          | 0                        | 70.8                  | 70       | 130       | 0.03537     | 8.06  | 25       |      |
| Chloroethane                | 0.03797          | 0.0092              | 0.04611          | 0                        | 82.3                  | 70       | 130       | 0.03999     | 5.18  | 25       |      |
| Chloroform                  | 0.03913          | 0.0046              | 0.04611          | 0                        | 84.9                  | 70       | 130       | 0.04215     | 7.42  | 25       |      |
| Chloromethane               | 0.03706          | 0.0092              | 0.04611          | 0                        | 80.4                  | 70       | 130       | 0.03971     | 6.91  | 25       |      |
| cis-1,2-Dichloroethene      | 0.03354          | 0.0046              | 0.04611          | 0                        | 72.7                  | 70       | 130       | 0.03575     | 6.37  | 25       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82763**

| Sample ID: 12080686-007AMSD | SampType: MSD    | TestCode: VOC_5035+ | Units: mg/Kg-dry | Prep Date: 8/21/2012     | Run ID: VOA-3_120822B |          |           |             |       |          |      |
|-----------------------------|------------------|---------------------|------------------|--------------------------|-----------------------|----------|-----------|-------------|-------|----------|------|
| Client ID: TB-03-23-25      | Batch ID: R82763 | TestNo: SW5035/8260 |                  | Analysis Date: 8/23/2012 | SeqNo: 2226289        |          |           |             |       |          |      |
| <hr/>                       |                  |                     |                  |                          |                       |          |           |             |       |          |      |
| Analyte                     | Result           | PQL                 | SPK value        | SPK Ref Val              | %REC                  | LowLimit | HighLimit | RPD Ref Val | %RPD  | RPDLimit | Qual |
| cis-1,3-Dichloropropene     | 0.02224          | 0.0018              | 0.04611          | 0                        | 48.2                  | 70       | 130       | 0.02473     | 10.6  | 25       | S    |
| Dibromochloromethane        | 0.02422          | 0.0046              | 0.04611          | 0                        | 52.5                  | 70       | 130       | 0.02756     | 12.9  | 25       | S    |
| Ethylbenzene                | 0.03769          | 0.0046              | 0.04611          | 0                        | 81.7                  | 70       | 130       | 0.03889     | 3.14  | 25       |      |
| Methyl tert-butyl ether     | 0.04275          | 0.0046              | 0.04611          | 0                        | 92.7                  | 70       | 130       | 0.04641     | 8.23  | 25       |      |
| Methylene chloride          | 0.04228          | 0.0092              | 0.04611          | 0                        | 91.7                  | 70       | 130       | 0.04421     | 4.47  | 25       |      |
| Styrene                     | 0.02703          | 0.0046              | 0.04611          | 0                        | 58.6                  | 70       | 130       | 0.03025     | 11.2  | 25       | S    |
| Tetrachloroethene           | 0.03851          | 0.0046              | 0.04611          | 0                        | 83.5                  | 70       | 130       | 0.03898     | 1.19  | 25       |      |
| Toluene                     | 0.03109          | 0.0046              | 0.04611          | 0.0004352                | 66.5                  | 70       | 130       | 0.03233     | 3.92  | 25       | S    |
| trans-1,2-Dichloroethene    | 0.04343          | 0.0046              | 0.04611          | 0                        | 94.2                  | 70       | 130       | 0.04499     | 3.52  | 25       |      |
| trans-1,3-Dichloropropene   | 0.02815          | 0.0018              | 0.04611          | 0                        | 61                    | 70       | 130       | 0.03014     | 6.82  | 25       | S    |
| Trichloroethene             | 0.03449          | 0.0046              | 0.04611          | 0.0004268                | 73.9                  | 70       | 130       | 0.03443     | 0.183 | 25       |      |
| Vinyl chloride              | 0.03949          | 0.0046              | 0.04611          | 0                        | 85.6                  | 70       | 130       | 0.04144     | 4.82  | 25       |      |
| Xylenes, Total              | 0.1164           | 0.014               | 0.1383           | 0                        | 84.1                  | 70       | 130       | 0.1204      | 3.45  | 25       |      |
| <hr/>                       |                  |                     |                  |                          |                       |          |           |             |       |          |      |
| Sample ID: VBLK082212A-3    | SampType: MBLK   | TestCode: VOC_ENCOR | Units: mg/Kg     | Prep Date:               | Run ID: VOA-3_120822B |          |           |             |       |          |      |
| Client ID: ZZZZZ            | Batch ID: R82763 | TestNo: SW5035/8260 |                  | Analysis Date: 8/22/2012 | SeqNo: 2226259        |          |           |             |       |          |      |
| Analyte                     | Result           | PQL                 | SPK value        | SPK Ref Val              | %REC                  | LowLimit | HighLimit | RPD Ref Val | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane       | ND               | 0.0050              |                  |                          |                       |          |           |             |       |          |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.0050              |                  |                          |                       |          |           |             |       |          |      |
| 1,1,2-Trichloroethane       | ND               | 0.0050              |                  |                          |                       |          |           |             |       |          |      |
| 1,1-Dichloroethane          | ND               | 0.0050              |                  |                          |                       |          |           |             |       |          |      |
| 1,1-Dichloroethene          | ND               | 0.0050              |                  |                          |                       |          |           |             |       |          |      |
| 1,2-Dichloroethane          | ND               | 0.0050              |                  |                          |                       |          |           |             |       |          |      |
| 1,2-Dichloropropane         | ND               | 0.0050              |                  |                          |                       |          |           |             |       |          |      |
| 2-Butanone                  | ND               | 0.075               |                  |                          |                       |          |           |             |       |          |      |
| 2-Hexanone                  | ND               | 0.020               |                  |                          |                       |          |           |             |       |          |      |
| 4-Methyl-2-pentanone        | ND               | 0.020               |                  |                          |                       |          |           |             |       |          |      |
| Acetone                     | ND               | 0.075               |                  |                          |                       |          |           |             |       |          |      |
| Benzene                     | ND               | 0.0050              |                  |                          |                       |          |           |             |       |          |      |
| Bromodichloromethane        | ND               | 0.0050              |                  |                          |                       |          |           |             |       |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82763

| Sample ID: VBLK082212A-3  | SampType: MBLK   | TestCode: VOC_ENCOD | Units: mg/Kg | Prep Date:               |      |          | Run ID: VOA-3_120822B |             |      |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82763 | TestNo: SW5035/8260 |              | Analysis Date: 8/22/2012 |      |          | SeqNo: 2226259        |             |      |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| Bromoform                 | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 0.010               |              |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.050               |              |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.010               |              |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Chloromethane             | ND               | 0.010               |              |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| cis-1,3-Dichloropropene   | ND               | 0.0020              |              |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | 0.00248          | 0.010               |              |                          |      |          |                       |             |      | J        |      |
| Styrene                   | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.0020              |              |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 0.015               |              |                          |      |          |                       |             |      |          |      |

| Sample ID: VLCS082212A-3  | SampType: LCS    | TestCode: VOC_ENCOD | Units: mg/Kg | Prep Date:               |      |          | Run ID: VOA-3_120822B |             |      |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82763 | TestNo: SW5035/8260 |              | Analysis Date: 8/22/2012 |      |          | SeqNo: 2226261        |             |      |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 0.05865          | 0.0050              | 0.05         | 0                        | 117  | 70       | 130                   | 0           | 0    |          |      |
| 1,1,2,2-Tetrachloroethane | 0.06013          | 0.0050              | 0.05         | 0                        | 120  | 70       | 130                   | 0           | 0    |          |      |
| 1,1,2-Trichloroethane     | 0.05545          | 0.0050              | 0.05         | 0                        | 111  | 70       | 130                   | 0           | 0    |          |      |
| 1,1-Dichloroethane        | 0.05622          | 0.0050              | 0.05         | 0                        | 112  | 70       | 130                   | 0           | 0    |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080686

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82763

| Sample ID: VLCS082212A-3  | SampType: LCS    | TestCode: VOC_ENCOR | Units: mg/Kg | Prep Date:               |      |          |           | Run ID: VOA-3_120822B |      |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82763 | TestNo: SW5035/8260 |              | Analysis Date: 8/22/2012 |      |          |           | SeqNo: 2226261        |      |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene        | 0.05847          | 0.0050              | 0.05         | 0                        | 117  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloroethane        | 0.06042          | 0.0050              | 0.05         | 0                        | 121  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloropropane       | 0.05159          | 0.0050              | 0.05         | 0                        | 103  | 70       | 130       | 0                     | 0    |          |      |
| 2-Butanone                | 0.1052           | 0.075               | 0.1          | 0                        | 105  | 70       | 130       | 0                     | 0    |          |      |
| 2-Hexanone                | 0.111            | 0.020               | 0.1          | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| 4-Methyl-2-pentanone      | 0.1101           | 0.020               | 0.1          | 0                        | 110  | 70       | 130       | 0                     | 0    |          |      |
| Acetone                   | 0.1271           | 0.075               | 0.1          | 0                        | 127  | 50       | 150       | 0                     | 0    |          |      |
| Benzene                   | 0.05089          | 0.0050              | 0.05         | 0                        | 102  | 70       | 130       | 0                     | 0    |          |      |
| Bromodichloromethane      | 0.06116          | 0.0050              | 0.05         | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| Bromoform                 | 0.061            | 0.0050              | 0.05         | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| Bromomethane              | 0.05903          | 0.010               | 0.05         | 0                        | 118  | 70       | 130       | 0                     | 0    |          |      |
| Carbon disulfide          | 0.1348           | 0.050               | 0.1          | 0                        | 135  | 70       | 130       | 0                     | 0    |          | S    |
| Carbon tetrachloride      | 0.05884          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130       | 0                     | 0    |          |      |
| Chlorobenzene             | 0.0599           | 0.0050              | 0.05         | 0                        | 120  | 70       | 130       | 0                     | 0    |          |      |
| Chloroethane              | 0.0606           | 0.010               | 0.05         | 0                        | 121  | 70       | 130       | 0                     | 0    |          |      |
| Chloroform                | 0.06144          | 0.0050              | 0.05         | 0                        | 123  | 70       | 130       | 0                     | 0    |          |      |
| Chloromethane             | 0.05201          | 0.010               | 0.05         | 0                        | 104  | 70       | 130       | 0                     | 0    |          |      |
| cis-1,2-Dichloroethene    | 0.05158          | 0.0050              | 0.05         | 0                        | 103  | 70       | 130       | 0                     | 0    |          |      |
| cis-1,3-Dichloropropene   | 0.05331          | 0.0020              | 0.05         | 0                        | 107  | 70       | 130       | 0                     | 0    |          |      |
| Dibromochloromethane      | 0.06209          | 0.0050              | 0.05         | 0                        | 124  | 70       | 130       | 0                     | 0    |          |      |
| Ethylbenzene              | 0.05677          | 0.0050              | 0.05         | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |
| Methyl tert-butyl ether   | 0.05566          | 0.0050              | 0.05         | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| Methylene chloride        | 0.06035          | 0.010               | 0.05         | 0.00248                  | 116  | 70       | 130       | 0                     | 0    |          |      |
| Styrene                   | 0.05775          | 0.0050              | 0.05         | 0                        | 116  | 70       | 130       | 0                     | 0    |          |      |
| Tetrachloroethene         | 0.05149          | 0.0050              | 0.05         | 0                        | 103  | 70       | 130       | 0                     | 0    |          |      |
| Toluene                   | 0.05245          | 0.0050              | 0.05         | 0                        | 105  | 70       | 130       | 0                     | 0    |          |      |
| trans-1,2-Dichloroethene  | 0.05926          | 0.0050              | 0.05         | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| trans-1,3-Dichloropropene | 0.06231          | 0.0020              | 0.05         | 0                        | 125  | 70       | 130       | 0                     | 0    |          |      |
| Trichloroethene           | 0.05206          | 0.0050              | 0.05         | 0                        | 104  | 70       | 130       | 0                     | 0    |          |      |
| Vinyl chloride            | 0.05606          | 0.0050              | 0.05         | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| Xylenes, Total            | 0.1778           | 0.015               | 0.15         | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |

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**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080686

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82763

| Sample ID: VLCSD082212A-3 | SampType: LCSD   | TestCode: VOC_ENCOR | Units: mg/Kg | Prep Date:               |      |          |           | Run ID: VOA-3_120822B |       |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82763 | TestNo: SW5035/8260 |              | Analysis Date: 8/22/2012 |      |          |           | SeqNo: 2226264        |       |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 0.06001          | 0.0050              | 0.05         | 0                        | 120  | 70       | 130       | 0.05865               | 2.29  | 20       |      |
| 1,1,2,2-Tetrachloroethane | 0.06097          | 0.0050              | 0.05         | 0                        | 122  | 70       | 130       | 0.06013               | 1.39  | 20       |      |
| 1,1,2-Trichloroethane     | 0.05516          | 0.0050              | 0.05         | 0                        | 110  | 70       | 130       | 0.05545               | 0.524 | 20       |      |
| 1,1-Dichloroethane        | 0.05602          | 0.0050              | 0.05         | 0                        | 112  | 70       | 130       | 0.05622               | 0.356 | 20       |      |
| 1,1-Dichloroethene        | 0.06061          | 0.0050              | 0.05         | 0                        | 121  | 70       | 130       | 0.05847               | 3.59  | 20       |      |
| 1,2-Dichloroethane        | 0.05922          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130       | 0.06042               | 2.01  | 20       |      |
| 1,2-Dichloropropane       | 0.05102          | 0.0050              | 0.05         | 0                        | 102  | 70       | 130       | 0.05159               | 1.11  | 20       |      |
| 2-Butanone                | 0.1089           | 0.075               | 0.1          | 0                        | 109  | 70       | 130       | 0.1052                | 3.49  | 20       |      |
| 2-Hexanone                | 0.114            | 0.020               | 0.1          | 0                        | 114  | 70       | 130       | 0.111                 | 2.69  | 20       |      |
| 4-Methyl-2-pentanone      | 0.1095           | 0.020               | 0.1          | 0                        | 109  | 70       | 130       | 0.1101                | 0.583 | 20       |      |
| Acetone                   | 0.132            | 0.075               | 0.1          | 0                        | 132  | 50       | 150       | 0.1271                | 3.84  | 20       |      |
| Benzene                   | 0.05112          | 0.0050              | 0.05         | 0                        | 102  | 70       | 130       | 0.05089               | 0.451 | 20       |      |
| Bromodichloromethane      | 0.05901          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130       | 0.06116               | 3.58  | 20       |      |
| Bromoform                 | 0.06082          | 0.0050              | 0.05         | 0                        | 122  | 70       | 130       | 0.061                 | 0.296 | 20       |      |
| Bromomethane              | 0.06795          | 0.010               | 0.05         | 0                        | 136  | 70       | 130       | 0.05903               | 14.0  | 20       | S    |
| Carbon disulfide          | 0.1368           | 0.050               | 0.1          | 0                        | 137  | 70       | 130       | 0.1348                | 1.53  | 20       | S    |
| Carbon tetrachloride      | 0.06048          | 0.0050              | 0.05         | 0                        | 121  | 70       | 130       | 0.05884               | 2.75  | 20       |      |
| Chlorobenzene             | 0.0597           | 0.0050              | 0.05         | 0                        | 119  | 70       | 130       | 0.0599                | 0.334 | 20       |      |
| Chloroethane              | 0.06087          | 0.010               | 0.05         | 0                        | 122  | 70       | 130       | 0.0606                | 0.445 | 20       |      |
| Chloroform                | 0.06083          | 0.0050              | 0.05         | 0                        | 122  | 70       | 130       | 0.06144               | 0.998 | 20       |      |
| Chloromethane             | 0.05345          | 0.010               | 0.05         | 0                        | 107  | 70       | 130       | 0.05201               | 2.73  | 20       |      |
| cis-1,2-Dichloroethene    | 0.05148          | 0.0050              | 0.05         | 0                        | 103  | 70       | 130       | 0.05158               | 0.194 | 20       |      |
| cis-1,3-Dichloropropene   | 0.05282          | 0.0020              | 0.05         | 0                        | 106  | 70       | 130       | 0.05331               | 0.923 | 20       |      |
| Dibromochloromethane      | 0.06146          | 0.0050              | 0.05         | 0                        | 123  | 70       | 130       | 0.06209               | 1.02  | 20       |      |
| Ethylbenzene              | 0.05716          | 0.0050              | 0.05         | 0                        | 114  | 70       | 130       | 0.05677               | 0.685 | 20       |      |
| Methyl tert-butyl ether   | 0.05497          | 0.0050              | 0.05         | 0                        | 110  | 70       | 130       | 0.05566               | 1.25  | 20       |      |
| Methylene chloride        | 0.05877          | 0.010               | 0.05         | 0.00248                  | 113  | 70       | 130       | 0.06035               | 2.65  | 20       |      |
| Styrene                   | 0.05791          | 0.0050              | 0.05         | 0                        | 116  | 70       | 130       | 0.05775               | 0.277 | 20       |      |
| Tetrachloroethene         | 0.05255          | 0.0050              | 0.05         | 0                        | 105  | 70       | 130       | 0.05149               | 2.04  | 20       |      |
| Toluene                   | 0.05302          | 0.0050              | 0.05         | 0                        | 106  | 70       | 130       | 0.05245               | 1.08  | 20       |      |
| trans-1,2-Dichloroethene  | 0.06053          | 0.0050              | 0.05         | 0                        | 121  | 70       | 130       | 0.05926               | 2.12  | 20       |      |

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 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82763**

| Sample ID: VLCSD082212A-3 | SampType: LCSD   | TestCode: VOC_ENCOD | Units: mg/Kg | Prep Date:               |      |          |           | Run ID: VOA-3_120822B |       |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82763 | TestNo: SW5035/8260 |              | Analysis Date: 8/22/2012 |      |          |           | SeqNo: 2226264        |       |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| trans-1,3-Dichloropropene | 0.06173          | 0.0020              | 0.05         | 0                        | 123  | 70       | 130       | 0.06231               | 0.935 | 20       |      |
| Trichloroethene           | 0.05276          | 0.0050              | 0.05         | 0                        | 106  | 70       | 130       | 0.05206               | 1.34  | 20       |      |
| Vinyl chloride            | 0.05785          | 0.0050              | 0.05         | 0                        | 116  | 70       | 130       | 0.05606               | 3.14  | 20       |      |
| Xylenes, Total            | 0.1802           | 0.015               | 0.15         | 0                        | 120  | 70       | 130       | 0.1778                | 1.33  | 20       |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82784

| Sample ID: VBLK082412-3   | SampType: MBLK   | TestCode: VOC_ENCOD | Units: mg/Kg | Prep Date:               |      |          | Run ID: VOA-3_120824A |             |      |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82784 | TestNo: SW5035/8260 |              | Analysis Date: 8/24/2012 |      |          | SeqNo: 2226852        |             |      |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| 2-Butanone                | ND               | 0.075               |              |                          |      |          |                       |             |      |          |      |
| 2-Hexanone                | ND               | 0.020               |              |                          |      |          |                       |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 0.020               |              |                          |      |          |                       |             |      |          |      |
| Acetone                   | ND               | 0.075               |              |                          |      |          |                       |             |      |          |      |
| Benzene                   | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Bromodichloromethane      | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Bromoform                 | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 0.010               |              |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.050               |              |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.010               |              |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Chloromethane             | ND               | 0.010               |              |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| cis-1,3-Dichloropropene   | ND               | 0.0020              |              |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | 0.00194          | 0.010               |              |                          |      |          |                       |             |      |          | J    |
| Styrene                   | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |

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**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82784

| Sample ID: VBLK082412-3   | SampType: MBLK   | TestCode: VOC_ENCOD | Units: mg/Kg | Prep Date:               |      |          | Run ID: VOA-3_120824A |             |      |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82784 | TestNo: SW5035/8260 |              | Analysis Date: 8/24/2012 |      |          | SeqNo: 2226852        |             |      |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| trans-1,3-Dichloropropene | ND               | 0.0020              |              |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | 0.00098          | 0.0050              |              |                          |      |          |                       |             |      |          | J    |
| Vinyl chloride            | ND               | 0.0050              |              |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 0.015               |              |                          |      |          |                       |             |      |          |      |
| Sample ID: VLCS082412-3   | SampType: LCS    | TestCode: VOC_ENCOD | Units: mg/Kg | Prep Date:               |      |          | Run ID: VOA-3_120824A |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R82784 | TestNo: SW5035/8260 |              | Analysis Date: 8/24/2012 |      |          | SeqNo: 2226858        |             |      |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 0.05417          | 0.0050              | 0.05         | 0                        | 108  | 70       | 130                   | 0           | 0    |          |      |
| 1,1,2,2-Tetrachloroethane | 0.0552           | 0.0050              | 0.05         | 0                        | 110  | 70       | 130                   | 0           | 0    |          |      |
| 1,1,2-Trichloroethane     | 0.05269          | 0.0050              | 0.05         | 0                        | 105  | 70       | 130                   | 0           | 0    |          |      |
| 1,1-Dichloroethane        | 0.05334          | 0.0050              | 0.05         | 0                        | 107  | 70       | 130                   | 0           | 0    |          |      |
| 1,1-Dichloroethene        | 0.05327          | 0.0050              | 0.05         | 0                        | 107  | 70       | 130                   | 0           | 0    |          |      |
| 1,2-Dichloroethane        | 0.06032          | 0.0050              | 0.05         | 0                        | 121  | 70       | 130                   | 0           | 0    |          |      |
| 1,2-Dichloropropane       | 0.05103          | 0.0050              | 0.05         | 0                        | 102  | 70       | 130                   | 0           | 0    |          |      |
| 2-Butanone                | 0.08692          | 0.075               | 0.1          | 0                        | 86.9 | 70       | 130                   | 0           | 0    |          |      |
| 2-Hexanone                | 0.09233          | 0.020               | 0.1          | 0                        | 92.3 | 70       | 130                   | 0           | 0    |          |      |
| 4-Methyl-2-pentanone      | 0.09667          | 0.020               | 0.1          | 0                        | 96.7 | 70       | 130                   | 0           | 0    |          |      |
| Acetone                   | 0.1149           | 0.075               | 0.1          | 0                        | 115  | 50       | 150                   | 0           | 0    |          |      |
| Benzene                   | 0.04934          | 0.0050              | 0.05         | 0                        | 98.7 | 70       | 130                   | 0           | 0    |          |      |
| Bromodichloromethane      | 0.05932          | 0.0050              | 0.05         | 0                        | 119  | 70       | 130                   | 0           | 0    |          |      |
| Bromoform                 | 0.05603          | 0.0050              | 0.05         | 0                        | 112  | 70       | 130                   | 0           | 0    |          |      |
| Bromomethane              | 0.0574           | 0.010               | 0.05         | 0                        | 115  | 70       | 130                   | 0           | 0    |          |      |
| Carbon disulfide          | 0.116            | 0.050               | 0.1          | 0                        | 116  | 70       | 130                   | 0           | 0    |          |      |
| Carbon tetrachloride      | 0.05471          | 0.0050              | 0.05         | 0                        | 109  | 70       | 130                   | 0           | 0    |          |      |
| Chlorobenzene             | 0.05364          | 0.0050              | 0.05         | 0                        | 107  | 70       | 130                   | 0           | 0    |          |      |
| Chloroethane              | 0.0527           | 0.010               | 0.05         | 0                        | 105  | 70       | 130                   | 0           | 0    |          |      |
| Chloroform                | 0.05897          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130                   | 0           | 0    |          |      |
| Chloromethane             | 0.05488          | 0.010               | 0.05         | 0                        | 110  | 70       | 130                   | 0           | 0    |          |      |
| cis-1,2-Dichloroethene    | 0.05041          | 0.0050              | 0.05         | 0                        | 101  | 70       | 130                   | 0           | 0    |          |      |

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**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080686

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82784

| Sample ID: VLCS082412-3   | SampType: LCS    | TestCode: VOC_ENCOR | Units: mg/Kg | Prep Date:               |      |          |           | Run ID: VOA-3_120824A |      |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82784 | TestNo: SW5035/8260 |              | Analysis Date: 8/24/2012 |      |          |           | SeqNo: 2226858        |      |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| cis-1,3-Dichloropropene   | 0.05241          | 0.0020              | 0.05         | 0                        | 105  | 70       | 130       | 0                     | 0    | 0        |      |
| Dibromochloromethane      | 0.05969          | 0.0050              | 0.05         | 0                        | 119  | 70       | 130       | 0                     | 0    | 0        |      |
| Ethylbenzene              | 0.04945          | 0.0050              | 0.05         | 0                        | 98.9 | 70       | 130       | 0                     | 0    | 0        |      |
| Methyl tert-butyl ether   | 0.05593          | 0.0050              | 0.05         | 0                        | 112  | 70       | 130       | 0                     | 0    | 0        |      |
| Methylene chloride        | 0.05839          | 0.010               | 0.05         | 0.00194                  | 113  | 70       | 130       | 0                     | 0    | 0        |      |
| Styrene                   | 0.0523           | 0.0050              | 0.05         | 0                        | 105  | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrachloroethene         | 0.04294          | 0.0050              | 0.05         | 0                        | 85.9 | 70       | 130       | 0                     | 0    | 0        |      |
| Toluene                   | 0.04947          | 0.0050              | 0.05         | 0                        | 98.9 | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,2-Dichloroethene  | 0.05369          | 0.0050              | 0.05         | 0                        | 107  | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,3-Dichloropropene | 0.05959          | 0.0020              | 0.05         | 0                        | 119  | 70       | 130       | 0                     | 0    | 0        |      |
| Trichloroethene           | 0.04867          | 0.0050              | 0.05         | 0.00098                  | 95.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl chloride            | 0.05294          | 0.0050              | 0.05         | 0                        | 106  | 70       | 130       | 0                     | 0    | 0        |      |
| Xylenes, Total            | 0.155            | 0.015               | 0.15         | 0                        | 103  | 70       | 130       | 0                     | 0    | 0        |      |

| Sample ID: VLCSD082412-3  | SampType: LCSD   | TestCode: VOC_ENCOR | Units: mg/Kg | Prep Date:               |      |          |           | Run ID: VOA-3_120824A |       |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82784 | TestNo: SW5035/8260 |              | Analysis Date: 8/24/2012 |      |          |           | SeqNo: 2226867        |       |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 0.05865          | 0.0050              | 0.05         | 0                        | 117  | 70       | 130       | 0.05417               | 7.94  | 20       |      |
| 1,1,2,2-Tetrachloroethane | 0.05875          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130       | 0.0552                | 6.23  | 20       |      |
| 1,1,2-Trichloroethane     | 0.05479          | 0.0050              | 0.05         | 0                        | 110  | 70       | 130       | 0.05269               | 3.91  | 20       |      |
| 1,1-Dichloroethane        | 0.05766          | 0.0050              | 0.05         | 0                        | 115  | 70       | 130       | 0.05334               | 7.78  | 20       |      |
| 1,1-Dichloroethene        | 0.05901          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130       | 0.05327               | 10.2  | 20       |      |
| 1,2-Dichloroethane        | 0.06138          | 0.0050              | 0.05         | 0                        | 123  | 70       | 130       | 0.06032               | 1.74  | 20       |      |
| 1,2-Dichloropropane       | 0.05315          | 0.0050              | 0.05         | 0                        | 106  | 70       | 130       | 0.05103               | 4.07  | 20       |      |
| 2-Butanone                | 0.09997          | 0.075               | 0.1          | 0                        | 100  | 70       | 130       | 0.08692               | 14.0  | 20       |      |
| 2-Hexanone                | 0.1069           | 0.020               | 0.1          | 0                        | 107  | 70       | 130       | 0.09233               | 14.6  | 20       |      |
| 4-Methyl-2-pentanone      | 0.1057           | 0.020               | 0.1          | 0                        | 106  | 70       | 130       | 0.09667               | 8.95  | 20       |      |
| Acetone                   | 0.1288           | 0.075               | 0.1          | 0                        | 129  | 50       | 150       | 0.1149                | 11.3  | 20       |      |
| Benzene                   | 0.0518           | 0.0050              | 0.05         | 0                        | 104  | 70       | 130       | 0.04934               | 4.86  | 20       |      |
| Bromodichloromethane      | 0.05951          | 0.0050              | 0.05         | 0                        | 119  | 70       | 130       | 0.05932               | 0.320 | 20       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82784**

| Sample ID: VLCSD082412-3  | SampType: LCSD   | TestCode: VOC_ENCOD | Units: mg/Kg | Prep Date:               |      |          |           | Run ID: VOA-3_120824A |      |          |      |
|---------------------------|------------------|---------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82784 | TestNo: SW5035/8260 |              | Analysis Date: 8/24/2012 |      |          |           | SeqNo: 2226867        |      |          |      |
| Analyte                   | Result           | PQL                 | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| Bromoform                 | 0.06013          | 0.0050              | 0.05         | 0                        | 120  | 70       | 130       | 0.05603               | 7.06 | 20       |      |
| Bromomethane              | 0.06129          | 0.010               | 0.05         | 0                        | 123  | 70       | 130       | 0.0574                | 6.55 | 20       |      |
| Carbon disulfide          | 0.1299           | 0.050               | 0.1          | 0                        | 130  | 70       | 130       | 0.116                 | 11.3 | 20       |      |
| Carbon tetrachloride      | 0.06044          | 0.0050              | 0.05         | 0                        | 121  | 70       | 130       | 0.05471               | 9.95 | 20       |      |
| Chlorobenzene             | 0.05683          | 0.0050              | 0.05         | 0                        | 114  | 70       | 130       | 0.05364               | 5.78 | 20       |      |
| Chloroethane              | 0.05988          | 0.010               | 0.05         | 0                        | 120  | 70       | 130       | 0.0527                | 12.8 | 20       |      |
| Chloroform                | 0.06108          | 0.0050              | 0.05         | 0                        | 122  | 70       | 130       | 0.05897               | 3.52 | 20       |      |
| Chloromethane             | 0.05701          | 0.010               | 0.05         | 0                        | 114  | 70       | 130       | 0.05488               | 3.81 | 20       |      |
| cis-1,2-Dichloroethene    | 0.05347          | 0.0050              | 0.05         | 0                        | 107  | 70       | 130       | 0.05041               | 5.89 | 20       |      |
| cis-1,3-Dichloropropene   | 0.05371          | 0.0020              | 0.05         | 0                        | 107  | 70       | 130       | 0.05241               | 2.45 | 20       |      |
| Dibromochloromethane      | 0.06101          | 0.0050              | 0.05         | 0                        | 122  | 70       | 130       | 0.05969               | 2.19 | 20       |      |
| Ethylbenzene              | 0.0545           | 0.0050              | 0.05         | 0                        | 109  | 70       | 130       | 0.04945               | 9.72 | 20       |      |
| Methyl tert-butyl ether   | 0.05728          | 0.0050              | 0.05         | 0                        | 115  | 70       | 130       | 0.05593               | 2.38 | 20       |      |
| Methylene chloride        | 0.05991          | 0.010               | 0.05         | 0.00194                  | 116  | 70       | 130       | 0.05839               | 2.57 | 20       |      |
| Styrene                   | 0.05519          | 0.0050              | 0.05         | 0                        | 110  | 70       | 130       | 0.0523                | 5.38 | 20       |      |
| Tetrachloroethene         | 0.04803          | 0.0050              | 0.05         | 0                        | 96.1 | 70       | 130       | 0.04294               | 11.2 | 20       |      |
| Toluene                   | 0.05173          | 0.0050              | 0.05         | 0                        | 103  | 70       | 130       | 0.04947               | 4.47 | 20       |      |
| trans-1,2-Dichloroethene  | 0.05924          | 0.0050              | 0.05         | 0                        | 118  | 70       | 130       | 0.05369               | 9.83 | 20       |      |
| trans-1,3-Dichloropropene | 0.06147          | 0.0020              | 0.05         | 0                        | 123  | 70       | 130       | 0.05959               | 3.11 | 20       |      |
| Trichloroethene           | 0.05207          | 0.0050              | 0.05         | 0.00098                  | 102  | 70       | 130       | 0.04867               | 6.75 | 20       |      |
| Vinyl chloride            | 0.06046          | 0.0050              | 0.05         | 0                        | 121  | 70       | 130       | 0.05294               | 13.3 | 20       |      |
| Xylenes, Total            | 0.1682           | 0.015               | 0.15         | 0                        | 112  | 70       | 130       | 0.155                 | 8.16 | 20       |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**STAT Analysis Corporation**

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Test No:** SW8270C      **Matrix:** S

**QC SUMMARY REPORT  
SURROGATE RECOVERIES**

| Sample ID        | CLPH2D4 | DCBZ12D4 | NO2BZD5 | PH246BR | PH2F | PHD5 | PHEN2F | PHEND14 |
|------------------|---------|----------|---------|---------|------|------|--------|---------|
| MB-64421-SVOC    | 68.8    | 68.0     | 71.6    | 90.6    | 63.6 | 74.7 | 81.7   | 109     |
| LCS-64421-SVOC   | 58.2    | 57.4     | 66.0    | 84.1    | 49.8 | 64.3 | 69.0   | 108     |
| 12080686-011A    | 48.7    | 47.0     | 50.4    | 91.1    | 42.5 | 55.3 | 61.9   | 109     |
| 12080686-011AMS  | 59.6    | 59.2     | 64.4    | 99.8    | 52.0 | 64.0 | 74.3   | 109     |
| 12080686-011AMSD | 49.0    | 47.6     | 55.1    | 82.7    | 43.3 | 53.9 | 61.8   | 98.7    |
| 12080686-012A    | 50.6    | 47.0     | 52.5    | 78.2    | 43.2 | 57.4 | 63.7   | 96.2    |

| Acronym  | Surrogate                | QC Limits |
|----------|--------------------------|-----------|
| CLPH2D4  | = 2-Chlorophenol-d4      | 20-130    |
| DCBZ12D4 | = 1,2-Dichlorobenzene-d4 | 20-130    |
| NO2BZD5  | = Nitrobenzene-d5        | 23-120    |
| PH246BR  | = 2,4,6-Tribromophenol   | 19-122    |
| PH2F     | = 2-Fluorophenol         | 25-121    |
| PHD5     | = Phenol-d5              | 24-113    |
| PHEN2F   | = 2-Fluorobiphenyl       | 30-115    |
| PHEND14  | = 4-Terphenyl-d14        | 18-137    |

\* Surrogate recovery outside acceptance limits

Prep Start Date: 8/22/2012 11:37:43

Prep End Date: 8/24/2012 1:08:09 P

Prep Factor Units:

mL / Kg

Prep Batch 64421 Prep Code: 3550\_SVOC Technician: FAC

| Sample ID        | Matrix | pH | SampAmt | Sol Added | Sol Recov | Fin Vol | factor  | PrepStart | PrepEnd   |
|------------------|--------|----|---------|-----------|-----------|---------|---------|-----------|-----------|
| MB-64421-SVOC    |        |    | 0.03    | 0         | 0         | 1       | 33.333  | 8/22/2012 | 8/22/2012 |
| LCS-64421-SVOC   |        |    | 0.03    | 0         | 0         | 1       | 33.333  | 8/22/2012 | 8/22/2012 |
| 12080686-011A    | Soil   |    | 0.03017 | 0         | 0         | 1       | 33.146  | 8/22/2012 | 8/22/2012 |
| 12080686-011AMS  | Soil   |    | 0.03018 | 0         | 0         | 1       | 33.135  | 8/22/2012 | 8/22/2012 |
| 12080686-011AMSD | Soil   |    | 0.03017 | 0         | 0         | 1       | 33.146  | 8/22/2012 | 8/22/2012 |
| 12080686-012A    | Soil   |    | 0.03001 | 0         | 0         | 1       | 33.322  | 8/22/2012 | 8/22/2012 |
| 12080691-001B    | Soil   |    | 0.03079 | 0         | 0         | 1       | 32.478  | 8/22/2012 | 8/22/2012 |
| 12080691-002B    | Soil   |    | 0.03023 | 0         | 0         | 10      | 330.797 | 8/22/2012 | 8/22/2012 |
| 12080691-003A    | Soil   |    | 0.0303  | 0         | 0         | 1       | 33.003  | 8/22/2012 | 8/22/2012 |
| 12080695-001B    | Soil   |    | 0.03058 | 0         | 0         | 1       | 32.701  | 8/22/2012 | 8/22/2012 |
| 12080695-002B    | Soil   |    | 0.03047 | 0         | 0         | 10      | 328.192 | 8/22/2012 | 8/22/2012 |
| 12080695-003B    | Soil   |    | 0.03027 | 0         | 0         | 1       | 33.036  | 8/22/2012 | 8/22/2012 |
| 12080695-004B    | Soil   |    | 0.03059 | 0         | 0         | 1       | 32.690  | 8/22/2012 | 8/22/2012 |
| 12080695-005B    | Soil   |    | 0.03017 | 0         | 0         | 1       | 33.146  | 8/22/2012 | 8/22/2012 |
| 12080696-001B    | Soil   |    | 0.03058 | 0         | 0         | 1       | 32.701  | 8/22/2012 | 8/22/2012 |
| 12080696-002B    | Soil   |    | 0.03008 | 0         | 0         | 10      | 332.447 | 8/22/2012 | 8/22/2012 |
| 12080759-001A    | Soil   |    | 0.03012 | 0         | 0         | 10      | 332.005 | 8/23/2012 | 8/23/2012 |
| 12080759-002A    | Soil   |    | 0.03022 | 0         | 0         | 1       | 33.091  | 8/23/2012 | 8/23/2012 |
| 12080759-003A    | Soil   |    | 0.03067 | 0         | 0         | 1       | 32.605  | 8/23/2012 | 8/23/2012 |
| 12080759-004A    | Soil   |    | 0.03011 | 0         | 0         | 1       | 33.212  | 8/23/2012 | 8/23/2012 |
| 12080759-005A    | Soil   |    | 0.03021 | 0         | 0         | 1       | 33.102  | 8/23/2012 | 8/23/2012 |
| 12080759-006A    | Soil   |    | 0.03054 | 0         | 0         | 1       | 32.744  | 8/23/2012 | 8/23/2012 |
| 12080759-007A    | Soil   |    | 0.03033 | 0         | 0         | 1       | 32.971  | 8/23/2012 | 8/23/2012 |
| 12080759-008A    | Soil   |    | 0.03022 | 0         | 0         | 1       | 33.091  | 8/23/2012 | 8/23/2012 |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 64421

| Sample ID: MB-64421-SVOC    | SampType: MBLK  | TestCode: SVOC_SOIL | Units: mg/Kg | Prep Date: 8/22/2012     | Run ID: SVOC-6_120822A |          |           |             |      |          |      |
|-----------------------------|-----------------|---------------------|--------------|--------------------------|------------------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZ            | Batch ID: 64421 | TestNo: SW8270C     |              | Analysis Date: 8/22/2012 | SeqNo: 2226017         |          |           |             |      |          |      |
| Analyte                     | Result          | PQL                 | SPK value    | SPK Ref Val              | %REC                   | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND              | 0.033               |              |                          |                        |          |           |             |      |          |      |
| Acenaphthylene              | ND              | 0.033               |              |                          |                        |          |           |             |      |          |      |
| Aniline                     | ND              | 0.33                |              |                          |                        |          |           |             |      |          |      |
| Anthracene                  | ND              | 0.033               |              |                          |                        |          |           |             |      |          |      |
| Benz(a)anthracene           | ND              | 0.033               |              |                          |                        |          |           |             |      |          |      |
| Benzidine                   | ND              | 0.33                |              |                          |                        |          |           |             |      |          |      |
| Benzo(a)pyrene              | ND              | 0.033               |              |                          |                        |          |           |             |      |          |      |
| Benzo(b)fluoranthene        | ND              | 0.033               |              |                          |                        |          |           |             |      |          |      |
| Benzo(g,h,i)perylene        | ND              | 0.033               |              |                          |                        |          |           |             |      |          |      |
| Benzo(k)fluoranthene        | ND              | 0.033               |              |                          |                        |          |           |             |      |          |      |
| Benzoic acid                | ND              | 0.83                |              |                          |                        |          |           |             |      |          |      |
| Benzyl alcohol              | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| Bis(2-chloroethoxy)methane  | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| Bis(2-chloroethyl)ether     | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND              | 0.83                |              |                          |                        |          |           |             |      |          |      |
| 4-Bromophenyl phenyl ether  | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| Butyl benzyl phthalate      | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| Carbazole                   | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| 4-Chloroaniline             | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| 4-Chloro-3-methylphenol     | ND              | 0.33                |              |                          |                        |          |           |             |      |          |      |
| 2-Chloronaphthalene         | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| 2-Chlorophenol              | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| 4-Chlorophenyl phenyl ether | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| Chrysene                    | ND              | 0.033               |              |                          |                        |          |           |             |      |          |      |
| Dibenz(a,h)anthracene       | ND              | 0.033               |              |                          |                        |          |           |             |      |          |      |
| Dibenzofuran                | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| 1,2-Dichlorobenzene         | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| 1,3-Dichlorobenzene         | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| 1,4-Dichlorobenzene         | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |
| 3,3'-Dichlorobenzidine      | ND              | 0.17                |              |                          |                        |          |           |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

BatchID: 64421

| Sample ID: MB-64421-SVOC   | SampType: MBLK  | TestCode: SVOC_SOIL | Units: mg/Kg | Prep Date: 8/22/2012     | Run ID: SVOC-6_120822A |
|----------------------------|-----------------|---------------------|--------------|--------------------------|------------------------|
| Client ID: ZZZZZ           | Batch ID: 64421 | TestNo: SW8270C     |              | Analysis Date: 8/22/2012 | SeqNo: 2226017         |
| <hr/>                      |                 |                     |              |                          |                        |
| Analyte                    | Result          | PQL                 | SPK value    | SPK Ref Val              | %REC                   |
| 2,4-Dichlorophenol         | ND              | 0.17                |              |                          |                        |
| Diethyl phthalate          | ND              | 0.17                |              |                          |                        |
| 2,4-Dimethylphenol         | ND              | 0.17                |              |                          |                        |
| Dimethyl phthalate         | ND              | 0.17                |              |                          |                        |
| 4,6-Dinitro-2-methylphenol | ND              | 0.33                |              |                          |                        |
| 2,4-Dinitrophenol          | ND              | 0.83                |              |                          |                        |
| 2,4-Dinitrotoluene         | ND              | 0.033               |              |                          |                        |
| 2,6-Dinitrotoluene         | ND              | 0.033               |              |                          |                        |
| Di-n-butyl phthalate       | ND              | 0.17                |              |                          |                        |
| Di-n-octyl phthalate       | ND              | 0.17                |              |                          |                        |
| Fluoranthene               | ND              | 0.033               |              |                          |                        |
| Fluorene                   | ND              | 0.033               |              |                          |                        |
| Hexachlorobenzene          | ND              | 0.17                |              |                          |                        |
| Hexachlorobutadiene        | ND              | 0.17                |              |                          |                        |
| Hexachlorocyclopentadiene  | ND              | 0.17                |              |                          |                        |
| Hexachloroethane           | ND              | 0.17                |              |                          |                        |
| Indeno(1,2,3-cd)pyrene     | ND              | 0.033               |              |                          |                        |
| Isophorone                 | ND              | 0.17                |              |                          |                        |
| 2-Methylnaphthalene        | ND              | 0.17                |              |                          |                        |
| 2-Methylphenol             | ND              | 0.17                |              |                          |                        |
| 4-Methylphenol             | ND              | 0.17                |              |                          |                        |
| Naphthalene                | ND              | 0.033               |              |                          |                        |
| 2-Nitroaniline             | ND              | 0.17                |              |                          |                        |
| 3-Nitroaniline             | ND              | 0.17                |              |                          |                        |
| 4-Nitroaniline             | ND              | 0.17                |              |                          |                        |
| 2-Nitrophenol              | ND              | 0.17                |              |                          |                        |
| 4-Nitrophenol              | ND              | 0.33                |              |                          |                        |
| Nitrobenzene               | ND              | 0.033               |              |                          |                        |
| N-Nitrosodi-n-propylamine  | ND              | 0.033               |              |                          |                        |
| N-Nitrosodimethylamine     | ND              | 0.17                |              |                          |                        |
| N-Nitrosodiphenylamine     | ND              | 0.033               |              |                          |                        |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 64421

| Sample ID: MB-64421-SVOC | SampType: MBLK  | TestCode: SVOC_SOIL | Units: mg/Kg | Prep Date: 8/22/2012     | Run ID: SVOC-6_120822A |          |           |             |      |          |      |
|--------------------------|-----------------|---------------------|--------------|--------------------------|------------------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZ         | Batch ID: 64421 | TestNo: SW8270C     |              | Analysis Date: 8/22/2012 | SeqNo: 2226017         |          |           |             |      |          |      |
| <hr/>                    |                 |                     |              |                          |                        |          |           |             |      |          |      |
| Analyte                  | Result          | PQL                 | SPK value    | SPK Ref Val              | %REC                   | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                               |    |       |
|-------------------------------|----|-------|
| 2, 2'-oxybis(1-Chloropropane) | ND | 0.17  |
| Pentachlorophenol             | ND | 0.033 |
| Phenanthrene                  | ND | 0.033 |
| Phenol                        | ND | 0.17  |
| Pyrene                        | ND | 0.033 |
| Pyridine                      | ND | 0.67  |
| 1,2,4-Trichlorobenzene        | ND | 0.17  |
| 2,4,5-Trichlorophenol         | ND | 0.17  |
| 2,4,6-Trichlorophenol         | ND | 0.17  |

| Sample ID: LCS-64421-SVOC | SampType: LCS   | TestCode: SVOC_SOIL | Units: mg/Kg | Prep Date: 8/22/2012     | Run ID: SVOC-6_120822A |          |           |             |      |          |      |
|---------------------------|-----------------|---------------------|--------------|--------------------------|------------------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: 64421 | TestNo: SW8270C     |              | Analysis Date: 8/22/2012 | SeqNo: 2226018         |          |           |             |      |          |      |
| <hr/>                     |                 |                     |              |                          |                        |          |           |             |      |          |      |
| Analyte                   | Result          | PQL                 | SPK value    | SPK Ref Val              | %REC                   | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                           |        |       |       |   |      |    |     |   |   |   |
|---------------------------|--------|-------|-------|---|------|----|-----|---|---|---|
| Acenaphthene              | 1.146  | 0.033 | 1.667 | 0 | 68.8 | 37 | 134 | 0 | 0 | 0 |
| 4-Chloro-3-methylphenol   | 2.397  | 0.33  | 3.333 | 0 | 71.9 | 29 | 134 | 0 | 0 | 0 |
| 2-Chlorophenol            | 1.906  | 0.17  | 3.333 | 0 | 57.2 | 29 | 105 | 0 | 0 | 0 |
| 1,4-Dichlorobenzene       | 0.8787 | 0.17  | 1.667 | 0 | 52.7 | 26 | 111 | 0 | 0 | 0 |
| 2,4-Dinitrotoluene        | 1.247  | 0.033 | 1.667 | 0 | 74.8 | 46 | 125 | 0 | 0 | 0 |
| 4-Nitrophenol             | 2.993  | 0.33  | 3.333 | 0 | 89.8 | 12 | 146 | 0 | 0 | 0 |
| N-Nitrosodi-n-propylamine | 1.01   | 0.033 | 1.667 | 0 | 60.6 | 29 | 109 | 0 | 0 | 0 |
| Pentachlorophenol         | 2.522  | 0.033 | 3.333 | 0 | 75.7 | 10 | 192 | 0 | 0 | 0 |
| Phenol                    | 2.027  | 0.17  | 3.333 | 0 | 60.8 | 27 | 104 | 0 | 0 | 0 |
| Pyrene                    | 1.527  | 0.033 | 1.667 | 0 | 91.6 | 42 | 148 | 0 | 0 | 0 |
| 1,2,4-Trichlorobenzene    | 0.9413 | 0.17  | 1.667 | 0 | 56.5 | 55 | 106 | 0 | 0 | 0 |

| Sample ID: 12080686-011AMS | SampType: MS    | TestCode: SVOC_SOIL | Units: mg/Kg-dry | Prep Date: 8/22/2012     | Run ID: SVOC-6_120822A |          |           |             |      |          |      |
|----------------------------|-----------------|---------------------|------------------|--------------------------|------------------------|----------|-----------|-------------|------|----------|------|
| Client ID: TB-05-15-17     | Batch ID: 64421 | TestNo: SW8270C     |                  | Analysis Date: 8/22/2012 | SeqNo: 2226020         |          |           |             |      |          |      |
| <hr/>                      |                 |                     |                  |                          |                        |          |           |             |      |          |      |
| Analyte                    | Result          | PQL                 | SPK value        | SPK Ref Val              | %REC                   | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|              |       |       |      |   |      |    |     |   |   |   |
|--------------|-------|-------|------|---|------|----|-----|---|---|---|
| Acenaphthene | 1.558 | 0.041 | 2.09 | 0 | 74.5 | 24 | 139 | 0 | 0 | 0 |
|--------------|-------|-------|------|---|------|----|-----|---|---|---|

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | *  | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080686

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 64421

| Sample ID: 12080686-011AMS  | SampType: MS    | TestCode: SVOC_SOIL | Units: mg/Kg-dry | Prep Date: 8/22/2012     |      |          | Run ID: SVOC-6_120822A |             |      |          |      |
|-----------------------------|-----------------|---------------------|------------------|--------------------------|------|----------|------------------------|-------------|------|----------|------|
| Client ID: TB-05-15-17      | Batch ID: 64421 | TestNo: SW8270C     |                  | Analysis Date: 8/22/2012 |      |          | SeqNo: 2226020         |             |      |          |      |
| Analyte                     | Result          | PQL                 | SPK value        | SPK Ref Val              | %REC | LowLimit | HighLimit              | RPD Ref Val | %RPD | RPDLimit | Qual |
| 4-Chloro-3-methylphenol     | 3.392           | 0.41                | 4.178            | 0                        | 81.2 | 28       | 121                    | 0           | 0    |          |      |
| 2-Chlorophenol              | 2.416           | 0.21                | 4.178            | 0                        | 57.8 | 21       | 102                    | 0           | 0    |          |      |
| 1,4-Dichlorobenzene         | 1.142           | 0.21                | 2.09             | 0                        | 54.7 | 27       | 95                     | 0           | 0    |          |      |
| 2,4-Dinitrotoluene          | 1.676           | 0.041               | 2.09             | 0                        | 80.2 | 32       | 127                    | 0           | 0    |          |      |
| 4-Nitrophenol               | 3.981           | 0.41                | 4.178            | 0                        | 95.3 | 10       | 156                    | 0           | 0    |          |      |
| N-Nitrosodi-n-propylamine   | 1.239           | 0.041               | 2.09             | 0                        | 59.3 | 16       | 122                    | 0           | 0    |          |      |
| Pentachlorophenol           | 3.602           | 0.041               | 4.178            | 0                        | 86.2 | 10       | 204                    | 0           | 0    |          |      |
| Phenol                      | 2.544           | 0.21                | 4.178            | 0                        | 60.9 | 20       | 103                    | 0           | 0    |          |      |
| Pyrene                      | 2.039           | 0.041               | 2.09             | 0                        | 97.6 | 10       | 184                    | 0           | 0    |          |      |
| 1,2,4-Trichlorobenzene      | 1.238           | 0.21                | 2.09             | 0                        | 59.3 | 55       | 106                    | 0           | 0    |          |      |
| Sample ID: 12080686-011AMSD | SampType: MSD   | TestCode: SVOC_SOIL | Units: mg/Kg-dry | Prep Date: 8/22/2012     |      |          | Run ID: SVOC-6_120822A |             |      |          |      |
| Client ID: TB-05-15-17      | Batch ID: 64421 | TestNo: SW8270C     |                  | Analysis Date: 8/22/2012 |      |          | SeqNo: 2226021         |             |      |          |      |
| Analyte                     | Result          | PQL                 | SPK value        | SPK Ref Val              | %REC | LowLimit | HighLimit              | RPD Ref Val | %RPD | RPDLimit | Qual |
| Acenaphthene                | 1.286           | 0.041               | 2.09             | 0                        | 61.5 | 24       | 139                    | 1.558       | 19.1 | 57       |      |
| 4-Chloro-3-methylphenol     | 2.835           | 0.41                | 4.179            | 0                        | 67.8 | 28       | 121                    | 3.392       | 17.9 | 88       |      |
| 2-Chlorophenol              | 2.032           | 0.21                | 4.179            | 0                        | 48.6 | 21       | 102                    | 2.416       | 17.3 | 49       |      |
| 1,4-Dichlorobenzene         | 0.9609          | 0.21                | 2.09             | 0                        | 46   | 27       | 95                     | 1.142       | 17.3 | 43       |      |
| 2,4-Dinitrotoluene          | 1.407           | 0.041               | 2.09             | 0                        | 67.3 | 32       | 127                    | 1.676       | 17.4 | 37       |      |
| 4-Nitrophenol               | 3.558           | 0.41                | 4.179            | 0                        | 85.1 | 10       | 156                    | 3.981       | 11.2 | 56       |      |
| N-Nitrosodi-n-propylamine   | 1.022           | 0.041               | 2.09             | 0                        | 48.9 | 16       | 122                    | 1.239       | 19.3 | 47       |      |
| Pentachlorophenol           | 3.112           | 0.041               | 4.179            | 0                        | 74.5 | 10       | 204                    | 3.602       | 14.6 | 47       |      |
| Phenol                      | 2.116           | 0.21                | 4.179            | 0                        | 50.6 | 20       | 103                    | 2.544       | 18.4 | 66       |      |
| Pyrene                      | 1.814           | 0.041               | 2.09             | 0                        | 86.8 | 10       | 184                    | 2.039       | 11.7 | 51       |      |
| 1,2,4-Trichlorobenzene      | 1.034           | 0.21                | 2.09             | 0                        | 49.5 | 55       | 106                    | 1.238       | 17.9 | 23       | S    |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82724

| Sample ID: PMMBK2 8/21/12    | SampType: MBLK   | TestCode: PMOIST | Units: wt% | Prep Date: 8/21/2012     | Run ID: BALANCE_120821B |
|------------------------------|------------------|------------------|------------|--------------------------|-------------------------|
| Client ID: ZZZZZ             | Batch ID: R82724 | TestNo: D2974    |            | Analysis Date: 8/22/2012 | SeqNo: 2225302          |
| <hr/>                        |                  |                  |            |                          |                         |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    |
| Percent Moisture             | ND               | 0.200            |            |                          | *                       |
| <hr/>                        |                  |                  |            |                          |                         |
| Sample ID: PMLCS-S2 8/21/12  | SampType: LCS    | TestCode: PMOIST | Units: wt% | Prep Date: 8/21/2012     | Run ID: BALANCE_120821B |
| Client ID: ZZZZZ             | Batch ID: R82724 | TestNo: D2974    |            | Analysis Date: 8/22/2012 | SeqNo: 2225303          |
| <hr/>                        |                  |                  |            |                          |                         |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    |
| Percent Moisture             | 4.52             | 0.200            | 5          | 0                        | 90.4                    |
|                              |                  |                  |            | 80                       | 120                     |
|                              |                  |                  |            | 0                        | 0                       |
|                              |                  |                  |            |                          | *                       |
| <hr/>                        |                  |                  |            |                          |                         |
| Sample ID: PMLCS-W2 8/21/12  | SampType: LCS    | TestCode: PMOIST | Units: wt% | Prep Date: 8/21/2012     | Run ID: BALANCE_120821B |
| Client ID: ZZZZZ             | Batch ID: R82724 | TestNo: D2974    |            | Analysis Date: 8/22/2012 | SeqNo: 2225304          |
| <hr/>                        |                  |                  |            |                          |                         |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    |
| Percent Moisture             | 99.79            | 0.200            | 99.8       | 0                        | 100                     |
|                              |                  |                  |            | 80                       | 120                     |
|                              |                  |                  |            | 0                        | 0                       |
|                              |                  |                  |            |                          | *                       |
| <hr/>                        |                  |                  |            |                          |                         |
| Sample ID: 12080686-007B DUP | SampType: DUP    | TestCode: PMOIST | Units: wt% | Prep Date: 8/21/2012     | Run ID: BALANCE_120821B |
| Client ID: TB-03-23-25       | Batch ID: R82724 | TestNo: D2974    |            | Analysis Date: 8/22/2012 | SeqNo: 2225321          |
| <hr/>                        |                  |                  |            |                          |                         |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    |
| Percent Moisture             | 18               | 0.200            | 0          | 0                        | 0                       |
|                              |                  |                  |            | 0                        | 0                       |
|                              |                  |                  |            | 18.45                    | 2.47                    |
|                              |                  |                  |            | 20                       | *                       |
| <hr/>                        |                  |                  |            |                          |                         |
| Sample ID: 12080686-011ADUP  | SampType: DUP    | TestCode: PMOIST | Units: wt% | Prep Date: 8/21/2012     | Run ID: BALANCE_120821B |
| Client ID: TB-05-15-17       | Batch ID: R82724 | TestNo: D2974    |            | Analysis Date: 8/22/2012 | SeqNo: 2225323          |
| <hr/>                        |                  |                  |            |                          |                         |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    |
| Percent Moisture             | 21.42            | 0.200            | 0          | 0                        | 0                       |
|                              |                  |                  |            | 0                        | 20.74                   |
|                              |                  |                  |            | 20.74                    | 3.23                    |
|                              |                  |                  |            | 20                       | *                       |

---

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

BatchID: R82754

| Sample ID: PMBLK2 8/22/12    | SampType: MBLK   | TestCode: PMOIST | Units: wt% | Prep Date: 8/22/2012     | Run ID: BALANCE_120822B |          |           |             |      |          |      |
|------------------------------|------------------|------------------|------------|--------------------------|-------------------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZ             | Batch ID: R82754 | TestNo: D2974    |            | Analysis Date: 8/23/2012 | SeqNo: 2226061          |          |           |             |      |          |      |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Percent Moisture             | ND               | 0.200            |            |                          |                         |          |           |             |      |          | *    |
| Sample ID: PMLCS-S2 8/22/12  | SampType: LCS    | TestCode: PMOIST | Units: wt% | Prep Date: 8/22/2012     | Run ID: BALANCE_120822B |          |           |             |      |          |      |
| Client ID: ZZZZZ             | Batch ID: R82754 | TestNo: D2974    |            | Analysis Date: 8/23/2012 | SeqNo: 2226062          |          |           |             |      |          |      |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Percent Moisture             | 4.37             | 0.200            | 5          | 0                        | 87.4                    | 80       | 120       | 0           | 0    |          | *    |
| Sample ID: PMLCS-W2 8/22/12  | SampType: LCS    | TestCode: PMOIST | Units: wt% | Prep Date: 8/22/2012     | Run ID: BALANCE_120822B |          |           |             |      |          |      |
| Client ID: ZZZZZ             | Batch ID: R82754 | TestNo: D2974    |            | Analysis Date: 8/23/2012 | SeqNo: 2226063          |          |           |             |      |          |      |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Percent Moisture             | 99.72            | 0.200            | 99.8       | 0                        | 99.9                    | 80       | 120       | 0           | 0    |          | *    |
| Sample ID: 12080686-002B DUP | SampType: DUP    | TestCode: PMOIST | Units: wt% | Prep Date: 8/22/2012     | Run ID: BALANCE_120822B |          |           |             |      |          |      |
| Client ID: TB-01-23-25       | Batch ID: R82754 | TestNo: D2974    |            | Analysis Date: 8/23/2012 | SeqNo: 2226065          |          |           |             |      |          |      |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Percent Moisture             | 21.04            | 0.200            | 0          | 0                        | 0                       | 0        | 0         | 20.42       | 2.99 | 20       | *    |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit<br>J - Analyte detected below quantitation limits<br>* - Non Accredited Parameter | S - Spike Recovery outside accepted recovery limits<br>R - RPD outside accepted recovery limits<br>H/HT - Holding Time Exceeded | B - Analyte detected in the associated Method Blank<br>E - Value above quantitation range |
|--------------------|--|---|---|

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080686  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

BatchID: R82761

|                              |                  |                  |            |                          |                         |
|------------------------------|------------------|------------------|------------|--------------------------|-------------------------|
| Sample ID: PMBLK4 8/22/12    | SampType: MBLK   | TestCode: PMOIST | Units: wt% | Prep Date: 8/22/2012     | Run ID: BALANCE_120822D |
| Client ID: ZZZZZ             | Batch ID: R82761 | TestNo: D2974    |            | Analysis Date: 8/23/2012 | SeqNo: 2226222          |
| <hr/>                        |                  |                  |            |                          |                         |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    |
| Percent Moisture             | ND               | 0.200            |            |                          | *                       |
| Sample ID: PMLCS-S4 8/22/12  | SampType: LCS    | TestCode: PMOIST | Units: wt% | Prep Date: 8/22/2012     | Run ID: BALANCE_120822D |
| Client ID: ZZZZZ             | Batch ID: R82761 | TestNo: D2974    |            | Analysis Date: 8/23/2012 | SeqNo: 2226223          |
| <hr/>                        |                  |                  |            |                          |                         |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    |
| Percent Moisture             | 4.36             | 0.200            | 5          | 0                        | 87.2                    |
|                              |                  |                  |            | 80                       | 120                     |
|                              |                  |                  |            | 0                        | 0                       |
|                              |                  |                  |            |                          | *                       |
| Sample ID: PMLCS-W4 8/22/12  | SampType: LCS    | TestCode: PMOIST | Units: wt% | Prep Date: 8/22/2012     | Run ID: BALANCE_120822D |
| Client ID: ZZZZZ             | Batch ID: R82761 | TestNo: D2974    |            | Analysis Date: 8/23/2012 | SeqNo: 2226224          |
| <hr/>                        |                  |                  |            |                          |                         |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    |
| Percent Moisture             | 99.78            | 0.200            | 99.8       | 0                        | 100                     |
|                              |                  |                  |            | 80                       | 120                     |
|                              |                  |                  |            | 0                        | 0                       |
|                              |                  |                  |            |                          | *                       |
| Sample ID: 12080711-011B DUP | SampType: DUP    | TestCode: PMOIST | Units: wt% | Prep Date: 8/22/2012     | Run ID: BALANCE_120822D |
| Client ID: ZZZZZ             | Batch ID: R82761 | TestNo: D2974    |            | Analysis Date: 8/23/2012 | SeqNo: 2226226          |
| <hr/>                        |                  |                  |            |                          |                         |
| Analyte                      | Result           | PQL              | SPK value  | SPK Ref Val              | %REC                    |
| Percent Moisture             | 18.09            | 0.200            | 0          | 0                        | 0                       |
|                              |                  |                  |            | 0                        | 0                       |
|                              |                  |                  |            |                          | 17.65                   |
|                              |                  |                  |            |                          | 2.46                    |
|                              |                  |                  |            |                          | 20                      |
|                              |                  |                  |            |                          | *                       |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

# STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

September 18, 2012

Terracon Consultants, Inc.  
650 W. Lake Street  
Suite 420  
Chicago, IL 60661  
Telephone: (312) 575-0014  
Fax: (312) 575-0111

RE: A2107017-7A, DOE-Kimball

STAT Project No: 12090402

Dear Rich O'Brien:

STAT Analysis received 7 samples for the referenced project on 9/10/2012 2:25:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Katelin Lewis

Project Manager

*The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.*

**Client:** Terracon Consultants, Inc.  
**Project:** A2107017-7A, DOE-Kimball  
**Lab Order:** 12090402

**Work Order Sample Summary**

| <b>Lab Sample ID</b> | <b>Client Sample ID</b> | <b>Tag Number</b> | <b>Collection Date</b> | <b>Date Received</b> |
|----------------------|-------------------------|-------------------|------------------------|----------------------|
| 12090402-001A        | GW-MW-04                |                   | 9/10/2012 12:30:00 PM  | 9/10/2012            |
| 12090402-002A        | GW-MW-04-FD             |                   | 9/10/2012 12:35:00 PM  | 9/10/2012            |
| 12090402-003A        | GW-MW-05                |                   | 9/10/2012 1:10:00 PM   | 9/10/2012            |
| 12090402-004A        | GW-MW-06                |                   | 9/10/2012 1:40:00 PM   | 9/10/2012            |
| 12090402-005A        | GW-MW-07                |                   | 9/10/2012 2:10:00 PM   | 9/10/2012            |
| 12090402-006A        | VOC Blank               |                   | 9/10/2012 2:15:00 PM   | 9/10/2012            |
| 12090402-007A        | Trip Blank              |                   |                        | 9/10/2012            |

**CLIENT:** Terracon Consultants, Inc.  
**Project:** A2107017-7A, DOE-Kimball  
**Lab Order:** 12090402

**CASE NARRATIVE**

---

The VOC water Matrix Spike/Matrix Spike Duplicate (MS/MSD) prepared from sample GW-MW-05 (12090402-003) had the following outside control limits:  
Acetone: 69%/69% (MS/MSD) recovery (QC limits 70-130%).

**STAT** Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** September 18, 2012**Date Printed:** September 18, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball  
**Lab ID:** 12090402-001

**Client Sample ID:** GW-MW-04**Collection Date:** 9/10/2012 12:30:00 PM**Matrix:** Water

| Analyses                                   | Result | RL    | Qualifier | Units | DF | Date Analyzed |
|--|--------|-------|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |        |       |           |       |    |               |
| Acetone                                    | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Benzene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromodichloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromoform                                  | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromomethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| 2-Butanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Carbon disulfide                           | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Carbon tetrachloride                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chlorobenzene                              | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chloroethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Chloroform                                 | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chloromethane                              | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Dibromochloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,2-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1-Dichloroethene                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| cis-1,2-Dichloroethene                     | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| trans-1,2-Dichloroethene                   | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,2-Dichloropropane                        | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| cis-1,3-Dichloropropene                    | ND     | 0.001 |           | mg/L  | 1  | 9/17/2012     |
| trans-1,3-Dichloropropene                  | ND     | 0.001 |           | mg/L  | 1  | 9/17/2012     |
| Ethylbenzene                               | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 2-Hexanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| 4-Methyl-2-pentanone                       | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Methylene chloride                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Methyl tert-butyl ether                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Styrene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Tetrachloroethene                          | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Toluene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,1-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,2-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Trichloroethene                            | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Vinyl chloride                             | ND     | 0.002 |           | mg/L  | 1  | 9/17/2012     |
| Xylenes, Total                             | ND     | 0.015 |           | mg/L  | 1  | 9/17/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** September 18, 2012**Date Printed:** September 18, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball  
**Lab ID:** 12090402-002

**Client Sample ID:** GW-MW-04-FD**Collection Date:** 9/10/2012 12:35:00 PM**Matrix:** Water

| Analyses                                   | Result | RL    | Qualifier | Units | DF | Date Analyzed |
|--|--------|-------|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |        |       |           |       |    |               |
| Acetone                                    | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Benzene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromodichloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromoform                                  | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromomethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| 2-Butanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Carbon disulfide                           | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Carbon tetrachloride                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chlorobenzene                              | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chloroethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Chloroform                                 | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chloromethane                              | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Dibromochloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,2-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1-Dichloroethene                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| cis-1,2-Dichloroethene                     | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| trans-1,2-Dichloroethene                   | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,2-Dichloropropane                        | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| cis-1,3-Dichloropropene                    | ND     | 0.001 |           | mg/L  | 1  | 9/17/2012     |
| trans-1,3-Dichloropropene                  | ND     | 0.001 |           | mg/L  | 1  | 9/17/2012     |
| Ethylbenzene                               | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 2-Hexanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| 4-Methyl-2-pentanone                       | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Methylene chloride                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Methyl tert-butyl ether                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Styrene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Tetrachloroethene                          | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Toluene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,1-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,2-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Trichloroethene                            | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Vinyl chloride                             | ND     | 0.002 |           | mg/L  | 1  | 9/17/2012     |
| Xylenes, Total                             | ND     | 0.015 |           | mg/L  | 1  | 9/17/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** September 18, 2012**Date Printed:** September 18, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball  
**Lab ID:** 12090402-003

**Client Sample ID:** GW-MW-05**Collection Date:** 9/10/2012 1:10:00 PM**Matrix:** Water

| Analyses                                   | Result | RL    | Qualifier | Units | DF | Date Analyzed |
|--|--------|-------|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |        |       |           |       |    |               |
| Acetone                                    | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| Benzene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Bromodichloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Bromoform                                  | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Bromomethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| 2-Butanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| Carbon disulfide                           | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| Carbon tetrachloride                       | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Chlorobenzene                              | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Chloroethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| Chloroform                                 | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Chloromethane                              | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| Dibromochloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,2-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1-Dichloroethene                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| cis-1,2-Dichloroethene                     | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| trans-1,2-Dichloroethene                   | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,2-Dichloropropane                        | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| cis-1,3-Dichloropropene                    | ND     | 0.001 |           | mg/L  | 1  | 9/18/2012     |
| trans-1,3-Dichloropropene                  | ND     | 0.001 |           | mg/L  | 1  | 9/18/2012     |
| Ethylbenzene                               | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 2-Hexanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| 4-Methyl-2-pentanone                       | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| Methylene chloride                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Methyl tert-butyl ether                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Styrene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Tetrachloroethene                          | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Toluene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1,1-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1,2-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Trichloroethene                            | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Vinyl chloride                             | ND     | 0.002 |           | mg/L  | 1  | 9/18/2012     |
| Xylenes, Total                             | ND     | 0.015 |           | mg/L  | 1  | 9/18/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** September 18, 2012**Date Printed:** September 18, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball  
**Lab ID:** 12090402-004

**Client Sample ID:** GW-MW-06**Collection Date:** 9/10/2012 1:40:00 PM**Matrix:** Water

| Analyses                                   | Result | RL    | Qualifier | Units | DF | Date Analyzed |
|--|--------|-------|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |        |       |           |       |    |               |
| Acetone                                    | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Benzene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromodichloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromoform                                  | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromomethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| 2-Butanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Carbon disulfide                           | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Carbon tetrachloride                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chlorobenzene                              | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chloroethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Chloroform                                 | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chloromethane                              | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Dibromochloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,2-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1-Dichloroethene                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| cis-1,2-Dichloroethene                     | 0.091  | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| trans-1,2-Dichloroethene                   | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,2-Dichloropropane                        | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| cis-1,3-Dichloropropene                    | ND     | 0.001 |           | mg/L  | 1  | 9/17/2012     |
| trans-1,3-Dichloropropene                  | ND     | 0.001 |           | mg/L  | 1  | 9/17/2012     |
| Ethylbenzene                               | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 2-Hexanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| 4-Methyl-2-pentanone                       | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Methylene chloride                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Methyl tert-butyl ether                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Styrene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Tetrachloroethene                          | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Toluene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,1-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,2-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Trichloroethene                            | 0.065  | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Vinyl chloride                             | 0.021  | 0.002 |           | mg/L  | 1  | 9/17/2012     |
| Xylenes, Total                             | ND     | 0.015 |           | mg/L  | 1  | 9/17/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** September 18, 2012**Date Printed:** September 18, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball  
**Lab ID:** 12090402-005

**Client Sample ID:** GW-MW-07**Collection Date:** 9/10/2012 2:10:00 PM**Matrix:** Water

| Analyses                                   | Result | RL    | Qualifier | Units | DF | Date Analyzed |
|--|--------|-------|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |        |       |           |       |    |               |
| Acetone                                    | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| Benzene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Bromodichloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Bromoform                                  | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Bromomethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| 2-Butanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| Carbon disulfide                           | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| Carbon tetrachloride                       | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Chlorobenzene                              | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Chloroethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| Chloroform                                 | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Chloromethane                              | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| Dibromochloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,2-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1-Dichloroethene                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| cis-1,2-Dichloroethene                     | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| trans-1,2-Dichloroethene                   | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,2-Dichloropropane                        | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| cis-1,3-Dichloropropene                    | ND     | 0.001 |           | mg/L  | 1  | 9/18/2012     |
| trans-1,3-Dichloropropene                  | ND     | 0.001 |           | mg/L  | 1  | 9/18/2012     |
| Ethylbenzene                               | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 2-Hexanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| 4-Methyl-2-pentanone                       | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| Methylene chloride                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Methyl tert-butyl ether                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Styrene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Tetrachloroethene                          | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Toluene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1,1-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1,2-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Trichloroethene                            | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Vinyl chloride                             | ND     | 0.002 |           | mg/L  | 1  | 9/18/2012     |
| Xylenes, Total                             | ND     | 0.015 |           | mg/L  | 1  | 9/18/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** September 18, 2012**Date Printed:** September 18, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball  
**Lab ID:** 12090402-006

**Client Sample ID:** VOC Blank**Collection Date:** 9/10/2012 2:15:00 PM**Matrix:** Water

| Analyses                                   | Result | RL    | Qualifier | Units | DF | Date Analyzed |
|--|--------|-------|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |        |       |           |       |    |               |
| Acetone                                    | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| Benzene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Bromodichloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Bromoform                                  | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Bromomethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| 2-Butanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| Carbon disulfide                           | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| Carbon tetrachloride                       | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Chlorobenzene                              | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Chloroethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| Chloroform                                 | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Chloromethane                              | ND     | 0.01  |           | mg/L  | 1  | 9/18/2012     |
| Dibromochloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,2-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1-Dichloroethene                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| cis-1,2-Dichloroethene                     | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| trans-1,2-Dichloroethene                   | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,2-Dichloropropane                        | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| cis-1,3-Dichloropropene                    | ND     | 0.001 |           | mg/L  | 1  | 9/18/2012     |
| trans-1,3-Dichloropropene                  | ND     | 0.001 |           | mg/L  | 1  | 9/18/2012     |
| Ethylbenzene                               | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 2-Hexanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| 4-Methyl-2-pentanone                       | ND     | 0.02  |           | mg/L  | 1  | 9/18/2012     |
| Methylene chloride                         | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Methyl tert-butyl ether                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Styrene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Tetrachloroethene                          | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Toluene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1,1-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| 1,1,2-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Trichloroethene                            | ND     | 0.005 |           | mg/L  | 1  | 9/18/2012     |
| Vinyl chloride                             | ND     | 0.002 |           | mg/L  | 1  | 9/18/2012     |
| Xylenes, Total                             | ND     | 0.015 |           | mg/L  | 1  | 9/18/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** September 18, 2012**Date Printed:** September 18, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball  
**Lab ID:** 12090402-007

**Client Sample ID:** Trip Blank  
**Collection Date:**  
**Matrix:** Water

| Analyses                                   | Result | RL    | Qualifier | Units | DF | Date Analyzed |
|--|--------|-------|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds by GC/MS</b> |        |       |           |       |    |               |
| Acetone                                    | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Benzene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromodichloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromoform                                  | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Bromomethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| 2-Butanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Carbon disulfide                           | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Carbon tetrachloride                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chlorobenzene                              | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chloroethane                               | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Chloroform                                 | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Chloromethane                              | ND     | 0.01  |           | mg/L  | 1  | 9/17/2012     |
| Dibromochloromethane                       | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,2-Dichloroethane                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1-Dichloroethene                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| cis-1,2-Dichloroethene                     | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| trans-1,2-Dichloroethene                   | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,2-Dichloropropane                        | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| cis-1,3-Dichloropropene                    | ND     | 0.001 |           | mg/L  | 1  | 9/17/2012     |
| trans-1,3-Dichloropropene                  | ND     | 0.001 |           | mg/L  | 1  | 9/17/2012     |
| Ethylbenzene                               | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 2-Hexanone                                 | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| 4-Methyl-2-pentanone                       | ND     | 0.02  |           | mg/L  | 1  | 9/17/2012     |
| Methylene chloride                         | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Methyl tert-butyl ether                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Styrene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,2,2-Tetrachloroethane                  | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Tetrachloroethene                          | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Toluene                                    | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,1-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| 1,1,2-Trichloroethane                      | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Trichloroethene                            | ND     | 0.005 |           | mg/L  | 1  | 9/17/2012     |
| Vinyl chloride                             | ND     | 0.002 |           | mg/L  | 1  | 9/17/2012     |
| Xylenes, Total                             | ND     | 0.015 |           | mg/L  | 1  | 9/17/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

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# STAT Analysis Corporation

## Sample Receipt Checklist

Client Name TERRACON - CHICAGO

Date and Time Received: 9/10/2012 2:25:00 PM

Work Order Number 12090402

Received by: CDF

Checklist completed by:

Signature

9/12/12

Date

Reviewed by:

KL

Initials

9-14-12

Date

Matrix:

Carrier name: Client Delivered

Shipping container/cooler in good condition? Yes  No  Not Present

Custody seals intact on shipping container/cooler? Yes  No  Not Present

Custody seals intact on sample bottles? Yes  No  Not Present

Chain of custody present? Yes  No

Chain of custody signed when relinquished and received? Yes  No

Chain of custody agrees with sample labels/containers? Yes  No

Samples in proper container/bottle? Yes  No

Sample containers intact? Yes  No

Sufficient sample volume for indicated test? Yes  No

All samples received within holding time? Yes  No

Container or Temp Blank temperature in compliance? Yes  No  Temperature 3.2 °C

Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No

Water - Samples pH checked? Yes  No  Checked by: \_\_\_\_\_

Water - Samples properly preserved? Yes  No  pH Adjusted? \_\_\_\_\_

Any No response must be detailed in the comments section below.

Comments: All VOA Vials For VOC Blank Have Headspace.

Client / Person contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Contacted by: \_\_\_\_\_

Response: \_\_\_\_\_

**STAT Analysis Corporation****CLIENT:** Terracon Consultants, Inc.**Work Order:** 12090402**Project:** A2107017-7A, DOE-Kimball**Test No:** SW8260B      **Matrix:** W**QC SUMMARY REPORT  
SURROGATE RECOVERIES**

| Sample ID        | BR4FBZ | BZMED8 | DBFM | DCA12D4 |  |  |  |  |
|------------------|--------|--------|------|---------|--|--|--|--|
| VBLK091712-7     | 98.7   | 97.4   | 94.4 | 105     |  |  |  |  |
| VLCS091712-7     | 101    | 99.6   | 92.9 | 106     |  |  |  |  |
| VLCSD091712-7    | 104    | 101    | 94.9 | 103     |  |  |  |  |
| 12090417-024AMS  | 103    | 99.6   | 95.0 | 102     |  |  |  |  |
| 12090417-024AMSD | 104    | 95.4   | 95.4 | 103     |  |  |  |  |
| 12090402-007A    | 96.9   | 97.4   | 96.9 | 107     |  |  |  |  |
| 12090402-001A    | 96.2   | 96.9   | 95.4 | 107     |  |  |  |  |
| 12090402-002A    | 96.1   | 97.7   | 95.8 | 106     |  |  |  |  |
| 12090402-004A    | 98.4   | 99.2   | 96.4 | 99.7    |  |  |  |  |
| VBLK091812-7     | 97.2   | 97.8   | 97.7 | 107     |  |  |  |  |
| VLCS091812-7     | 101    | 101    | 101  | 104     |  |  |  |  |
| 12090402-006A    | 96.5   | 98.8   | 94.9 | 107     |  |  |  |  |
| 12090402-003A    | 97.5   | 98.1   | 98.6 | 103     |  |  |  |  |
| 12090402-003AMS  | 102    | 101    | 95.8 | 105     |  |  |  |  |
| 12090402-003AMSD | 99.3   | 98.6   | 97.9 | 104     |  |  |  |  |
| 12090402-005A    | 96.3   | 96.3   | 97.2 | 102     |  |  |  |  |

| Acronym | Surrogate               | QC Limits |
|---------|-------------------------|-----------|
| BR4FBZ  | = 4-Bromofluorobenzene  | 86-115    |
| BZMED8  | = Toluene-d8            | 88-110    |
| DBFM    | = Dibromofluoromethane  | 86-118    |
| DCA12D4 | = 1,2-Dichloroethane-d4 | 80-120    |

\* Surrogate recovery outside acceptance limit

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R83342

| Sample ID: VBLK091712-7   | SampType: MBLK   | TestCode: VOC_W+ | Units: mg/L | Prep Date:               | Run ID: VOA-7_120917A |          |           |             |      |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R83342 | TestNo: SW8260B  |             | Analysis Date: 9/17/2012 | SeqNo: 2242431        |          |           |             |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC                  | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 2-Butanone                | ND               | 0.020            |             |                          |                       |          |           |             |      |          |      |
| 2-Hexanone                | ND               | 0.020            |             |                          |                       |          |           |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 0.020            |             |                          |                       |          |           |             |      |          |      |
| Acetone                   | ND               | 0.020            |             |                          |                       |          |           |             |      |          |      |
| Benzene                   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Bromodichloromethane      | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Bromoform                 | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Bromomethane              | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| Carbon disulfide          | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Chlorobenzene             | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Chloroethane              | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| Chloroform                | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Chloromethane             | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| cis-1,2-Dichloroethene    | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| cis-1,3-Dichloropropene   | ND               | 0.0010           |             |                          |                       |          |           |             |      |          |      |
| Dibromochloromethane      | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Ethylbenzene              | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Methylene chloride        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Styrene                   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Tetrachloroethene         | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Toluene                   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R83342

| Sample ID: VBLK091712-7   | SampType: MBLK   | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          | Run ID: VOA-7_120917A |             |      |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R83342 | TestNo: SW8260B  |             | Analysis Date: 9/17/2012 |      |          | SeqNo: 2242431        |             |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| trans-1,2-Dichloroethene  | ND               | 0.0050           |             |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.0010           |             |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 0.0050           |             |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.0020           |             |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 0.015            |             |                          |      |          |                       |             |      |          |      |
| Sample ID: VLCS091712-7   | SampType: LCS    | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          | Run ID: VOA-7_120917A |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R83342 | TestNo: SW8260B  |             | Analysis Date: 9/17/2012 |      |          | SeqNo: 2242432        |             |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 0.01879          | 0.0050           | 0.02        | 0                        | 94   | 70       | 130                   | 0           | 0    |          |      |
| 1,1,2,2-Tetrachloroethane | 0.01965          | 0.0050           | 0.02        | 0                        | 98.3 | 70       | 130                   | 0           | 0    |          |      |
| 1,1,2-Trichloroethane     | 0.01961          | 0.0050           | 0.02        | 0                        | 98   | 70       | 130                   | 0           | 0    |          |      |
| 1,1-Dichloroethane        | 0.01808          | 0.0050           | 0.02        | 0                        | 90.4 | 70       | 130                   | 0           | 0    |          |      |
| 1,1-Dichloroethene        | 0.01857          | 0.0050           | 0.02        | 0                        | 92.8 | 70       | 130                   | 0           | 0    |          |      |
| 1,2-Dichloroethane        | 0.01746          | 0.0050           | 0.02        | 0                        | 87.3 | 70       | 130                   | 0           | 0    |          |      |
| 1,2-Dichloropropane       | 0.0184           | 0.0050           | 0.02        | 0                        | 92   | 70       | 130                   | 0           | 0    |          |      |
| 2-Butanone                | 0.03386          | 0.020            | 0.04        | 0                        | 84.6 | 70       | 130                   | 0           | 0    |          |      |
| 2-Hexanone                | 0.03283          | 0.020            | 0.04        | 0                        | 82.1 | 70       | 130                   | 0           | 0    |          |      |
| 4-Methyl-2-pentanone      | 0.03036          | 0.020            | 0.04        | 0                        | 75.9 | 70       | 130                   | 0           | 0    |          |      |
| Acetone                   | 0.02543          | 0.020            | 0.04        | 0                        | 63.6 | 50       | 150                   | 0           | 0    |          |      |
| Benzene                   | 0.01993          | 0.0050           | 0.02        | 0                        | 99.7 | 70       | 130                   | 0           | 0    |          |      |
| Bromodichloromethane      | 0.01824          | 0.0050           | 0.02        | 0                        | 91.2 | 70       | 130                   | 0           | 0    |          |      |
| Bromoform                 | 0.0187           | 0.0050           | 0.02        | 0                        | 93.5 | 70       | 130                   | 0           | 0    |          |      |
| Bromomethane              | 0.01484          | 0.010            | 0.02        | 0                        | 74.2 | 70       | 130                   | 0           | 0    |          |      |
| Carbon disulfide          | 0.03946          | 0.010            | 0.04        | 0                        | 98.6 | 70       | 130                   | 0           | 0    |          |      |
| Carbon tetrachloride      | 0.01821          | 0.0050           | 0.02        | 0                        | 91   | 70       | 130                   | 0           | 0    |          |      |
| Chlorobenzene             | 0.02303          | 0.0050           | 0.02        | 0                        | 115  | 70       | 130                   | 0           | 0    |          |      |
| Chloroethane              | 0.0173           | 0.010            | 0.02        | 0                        | 86.5 | 70       | 130                   | 0           | 0    |          |      |
| Chloroform                | 0.01826          | 0.0050           | 0.02        | 0                        | 91.3 | 70       | 130                   | 0           | 0    |          |      |
| Chloromethane             | 0.01866          | 0.010            | 0.02        | 0                        | 93.3 | 70       | 130                   | 0           | 0    |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R83342

| Sample ID: VLCS091712-7   | SampType: LCS    | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          | Run ID: VOA-7_120917A |             |      |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R83342 | TestNo: SW8260B  |             | Analysis Date: 9/17/2012 |      |          | SeqNo: 2242432        |             |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| cis-1,2-Dichloroethene    | 0.01846          | 0.0050           | 0.02        | 0                        | 92.3 | 70       | 130                   | 0           | 0    | 0        |      |
| cis-1,3-Dichloropropene   | 0.01833          | 0.0010           | 0.02        | 0                        | 91.7 | 70       | 130                   | 0           | 0    | 0        |      |
| Dibromochloromethane      | 0.02079          | 0.0050           | 0.02        | 0                        | 104  | 70       | 130                   | 0           | 0    | 0        |      |
| Ethylbenzene              | 0.02109          | 0.0050           | 0.02        | 0                        | 105  | 70       | 130                   | 0           | 0    | 0        |      |
| Methyl tert-butyl ether   | 0.01713          | 0.0050           | 0.02        | 0                        | 85.7 | 50       | 150                   | 0           | 0    | 0        |      |
| Methylene chloride        | 0.01723          | 0.0050           | 0.02        | 0                        | 86.2 | 70       | 130                   | 0           | 0    | 0        |      |
| Styrene                   | 0.02048          | 0.0050           | 0.02        | 0                        | 102  | 70       | 130                   | 0           | 0    | 0        |      |
| Tetrachloroethene         | 0.0213           | 0.0050           | 0.02        | 0                        | 106  | 70       | 130                   | 0           | 0    | 0        |      |
| Toluene                   | 0.01963          | 0.0050           | 0.02        | 0                        | 98.2 | 70       | 130                   | 0           | 0    | 0        |      |
| trans-1,2-Dichloroethene  | 0.01828          | 0.0050           | 0.02        | 0                        | 91.4 | 70       | 130                   | 0           | 0    | 0        |      |
| trans-1,3-Dichloropropene | 0.02083          | 0.0010           | 0.02        | 0                        | 104  | 70       | 130                   | 0           | 0    | 0        |      |
| Trichloroethene           | 0.0185           | 0.0050           | 0.02        | 0                        | 92.5 | 70       | 130                   | 0           | 0    | 0        |      |
| Vinyl chloride            | 0.01776          | 0.0020           | 0.02        | 0                        | 88.8 | 70       | 130                   | 0           | 0    | 0        |      |
| Xylenes, Total            | 0.06748          | 0.015            | 0.06        | 0                        | 112  | 70       | 130                   | 0           | 0    | 0        |      |

| Sample ID: VLCSD091712-7  | SampType: LCSD   | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          | Run ID: VOA-7_120917A |             |       |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------------------|-------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R83342 | TestNo: SW8260B  |             | Analysis Date: 9/17/2012 |      |          | SeqNo: 2242433        |             |       |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 0.01835          | 0.0050           | 0.02        | 0                        | 91.8 | 70       | 130                   | 0.01879     | 2.37  | 20       |      |
| 1,1,2,2-Tetrachloroethane | 0.01985          | 0.0050           | 0.02        | 0                        | 99.2 | 70       | 130                   | 0.01965     | 1.01  | 20       |      |
| 1,1,2-Trichloroethane     | 0.01976          | 0.0050           | 0.02        | 0                        | 98.8 | 70       | 130                   | 0.01961     | 0.762 | 20       |      |
| 1,1-Dichloroethane        | 0.01819          | 0.0050           | 0.02        | 0                        | 91   | 70       | 130                   | 0.01808     | 0.607 | 20       |      |
| 1,1-Dichloroethene        | 0.01803          | 0.0050           | 0.02        | 0                        | 90.2 | 70       | 130                   | 0.01857     | 2.95  | 20       |      |
| 1,2-Dichloroethane        | 0.01753          | 0.0050           | 0.02        | 0                        | 87.6 | 70       | 130                   | 0.01746     | 0.400 | 20       |      |
| 1,2-Dichloropropane       | 0.01892          | 0.0050           | 0.02        | 0                        | 94.6 | 70       | 130                   | 0.0184      | 2.79  | 20       |      |
| 2-Butanone                | 0.03282          | 0.020            | 0.04        | 0                        | 82   | 70       | 130                   | 0.03386     | 3.12  | 20       |      |
| 2-Hexanone                | 0.03204          | 0.020            | 0.04        | 0                        | 80.1 | 70       | 130                   | 0.03283     | 2.44  | 20       |      |
| 4-Methyl-2-pentanone      | 0.03029          | 0.020            | 0.04        | 0                        | 75.7 | 70       | 130                   | 0.03036     | 0.231 | 20       |      |
| Acetone                   | 0.02487          | 0.020            | 0.04        | 0                        | 62.2 | 50       | 150                   | 0.02543     | 2.23  | 20       |      |
| Benzene                   | 0.01955          | 0.0050           | 0.02        | 0                        | 97.8 | 70       | 130                   | 0.01993     | 1.93  | 20       |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | *  | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R83342

| Sample ID: VLCSD091712-7  | SampType: LCSD   | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          |           | Run ID: VOA-7_120917A |       |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R83342 | TestNo: SW8260B  |             | Analysis Date: 9/17/2012 |      |          |           | SeqNo: 2242433        |       |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| Bromodichloromethane      | 0.01758          | 0.0050           | 0.02        | 0                        | 87.9 | 70       | 130       | 0.01824               | 3.69  | 20       |      |
| Bromoform                 | 0.01867          | 0.0050           | 0.02        | 0                        | 93.4 | 70       | 130       | 0.0187                | 0.161 | 20       |      |
| Bromomethane              | 0.01477          | 0.010            | 0.02        | 0                        | 73.8 | 70       | 130       | 0.01484               | 0.473 | 20       |      |
| Carbon disulfide          | 0.03909          | 0.010            | 0.04        | 0                        | 97.7 | 70       | 130       | 0.03946               | 0.942 | 20       |      |
| Carbon tetrachloride      | 0.0177           | 0.0050           | 0.02        | 0                        | 88.5 | 70       | 130       | 0.01821               | 2.84  | 20       |      |
| Chlorobenzene             | 0.02275          | 0.0050           | 0.02        | 0                        | 114  | 70       | 130       | 0.02303               | 1.22  | 20       |      |
| Chloroethane              | 0.01798          | 0.010            | 0.02        | 0                        | 89.9 | 70       | 130       | 0.0173                | 3.85  | 20       |      |
| Chloroform                | 0.01892          | 0.0050           | 0.02        | 0                        | 94.6 | 70       | 130       | 0.01826               | 3.55  | 20       |      |
| Chloromethane             | 0.01888          | 0.010            | 0.02        | 0                        | 94.4 | 70       | 130       | 0.01866               | 1.17  | 20       |      |
| cis-1,2-Dichloroethene    | 0.01852          | 0.0050           | 0.02        | 0                        | 92.6 | 70       | 130       | 0.01846               | 0.324 | 20       |      |
| cis-1,3-Dichloropropene   | 0.01812          | 0.0010           | 0.02        | 0                        | 90.6 | 70       | 130       | 0.01833               | 1.15  | 20       |      |
| Dibromochloromethane      | 0.02051          | 0.0050           | 0.02        | 0                        | 103  | 70       | 130       | 0.02079               | 1.36  | 20       |      |
| Ethylbenzene              | 0.02053          | 0.0050           | 0.02        | 0                        | 103  | 70       | 130       | 0.02109               | 2.69  | 20       |      |
| Methyl tert-butyl ether   | 0.01755          | 0.0050           | 0.02        | 0                        | 87.8 | 50       | 150       | 0.01713               | 2.42  | 20       |      |
| Methylene chloride        | 0.01689          | 0.0050           | 0.02        | 0                        | 84.4 | 70       | 130       | 0.01723               | 1.99  | 20       |      |
| Styrene                   | 0.02031          | 0.0050           | 0.02        | 0                        | 102  | 70       | 130       | 0.02048               | 0.834 | 20       |      |
| Tetrachloroethene         | 0.02098          | 0.0050           | 0.02        | 0                        | 105  | 70       | 130       | 0.0213                | 1.51  | 20       |      |
| Toluene                   | 0.01973          | 0.0050           | 0.02        | 0                        | 98.6 | 70       | 130       | 0.01963               | 0.508 | 20       |      |
| trans-1,2-Dichloroethene  | 0.01833          | 0.0050           | 0.02        | 0                        | 91.7 | 70       | 130       | 0.01828               | 0.273 | 20       |      |
| trans-1,3-Dichloropropene | 0.02022          | 0.0010           | 0.02        | 0                        | 101  | 70       | 130       | 0.02083               | 2.97  | 20       |      |
| Trichloroethene           | 0.01899          | 0.0050           | 0.02        | 0                        | 95   | 70       | 130       | 0.0185                | 2.61  | 20       |      |
| Vinyl chloride            | 0.01758          | 0.0020           | 0.02        | 0                        | 87.9 | 70       | 130       | 0.01776               | 1.02  | 20       |      |
| Xylenes, Total            | 0.06731          | 0.015            | 0.06        | 0                        | 112  | 70       | 130       | 0.06748               | 0.252 | 20       |      |

| Sample ID: 12090417-024AMS | SampType: MS     | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          |           | Run ID: VOA-7_120917A |      |          |      |
|----------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ           | Batch ID: R83342 | TestNo: SW8260B  |             | Analysis Date: 9/17/2012 |      |          |           | SeqNo: 2243190        |      |          |      |
| Analyte                    | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane      | 0.1829           | 0.050            | 0.2         | 0                        | 91.5 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1,2,2-Tetrachloroethane  | 0.1971           | 0.050            | 0.2         | 0                        | 98.6 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1,2-Trichloroethane      | 0.2088           | 0.050            | 0.2         | 0                        | 104  | 70       | 130       | 0                     | 0    | 0        |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R83342

| Sample ID:                | 12090417-024AMS | SampType: | MS     | TestCode: | VOC_W+      | Units:         | mg/L     | Prep Date: |             |                | Run ID: VOA-7_120917A |      |  |
|---------------------------|-----------------|-----------|--------|-----------|-------------|----------------|----------|------------|-------------|----------------|-----------------------|------|--|
| Client ID:                | zzzzz           | Batch ID: | R83342 | TestNo:   | SW8260B     | Analysis Date: |          |            | 9/17/2012   | SeqNo: 2243190 |                       |      |  |
| Analyte                   |                 | Result    | PQL    | SPK value | SPK Ref Val | %REC           | LowLimit | HighLimit  | RPD Ref Val | %RPD           | RPDLimit              | Qual |  |
| 1,1-Dichloroethane        |                 | 0.1776    | 0.050  | 0.2       | 0           | 88.8           | 70       | 130        | 0           | 0              | 0                     |      |  |
| 1,1-Dichloroethene        |                 | 0.1811    | 0.050  | 0.2       | 0           | 90.6           | 70       | 130        | 0           | 0              | 0                     |      |  |
| 1,2-Dichloroethane        |                 | 0.1772    | 0.050  | 0.2       | 0           | 88.6           | 70       | 130        | 0           | 0              | 0                     |      |  |
| 1,2-Dichloropropane       |                 | 0.1906    | 0.050  | 0.2       | 0           | 95.3           | 70       | 130        | 0           | 0              | 0                     |      |  |
| 2-Butanone                |                 | 0.3437    | 0.20   | 0.4       | 0           | 85.9           | 70       | 130        | 0           | 0              | 0                     |      |  |
| 2-Hexanone                |                 | 0.3258    | 0.20   | 0.4       | 0           | 81.5           | 70       | 130        | 0           | 0              | 0                     |      |  |
| 4-Methyl-2-pentanone      |                 | 0.3131    | 0.20   | 0.4       | 0           | 78.3           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Acetone                   |                 | 0.2804    | 0.20   | 0.4       | 0           | 70.1           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Benzene                   |                 | 0.1944    | 0.050  | 0.2       | 0           | 97.2           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Bromodichloromethane      |                 | 0.1833    | 0.050  | 0.2       | 0           | 91.7           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Bromoform                 |                 | 0.1839    | 0.050  | 0.2       | 0           | 92             | 70       | 130        | 0           | 0              | 0                     |      |  |
| Bromomethane              |                 | 0.1524    | 0.10   | 0.2       | 0           | 76.2           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Carbon disulfide          |                 | 0.4003    | 0.10   | 0.4       | 0           | 100            | 70       | 130        | 0           | 0              | 0                     |      |  |
| Carbon tetrachloride      |                 | 0.1763    | 0.050  | 0.2       | 0           | 88.2           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Chlorobenzene             |                 | 0.2256    | 0.050  | 0.2       | 0           | 113            | 70       | 130        | 0           | 0              | 0                     |      |  |
| Chloroethane              |                 | 0.1792    | 0.10   | 0.2       | 0           | 89.6           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Chloroform                |                 | 0.193     | 0.050  | 0.2       | 0           | 96.5           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Chloromethane             |                 | 0.192     | 0.10   | 0.2       | 0           | 96             | 70       | 130        | 0           | 0              | 0                     |      |  |
| cis-1,2-Dichloroethene    |                 | 0.184     | 0.050  | 0.2       | 0           | 92             | 70       | 130        | 0           | 0              | 0                     |      |  |
| cis-1,3-Dichloropropene   |                 | 0.179     | 0.010  | 0.2       | 0           | 89.5           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Dibromochloromethane      |                 | 0.2152    | 0.050  | 0.2       | 0           | 108            | 70       | 130        | 0           | 0              | 0                     |      |  |
| Ethylbenzene              |                 | 0.2058    | 0.050  | 0.2       | 0           | 103            | 70       | 130        | 0           | 0              | 0                     |      |  |
| Methyl tert-butyl ether   |                 | 0.1794    | 0.050  | 0.2       | 0           | 89.7           | 50       | 150        | 0           | 0              | 0                     |      |  |
| Methylene chloride        |                 | 0.1732    | 0.050  | 0.2       | 0           | 86.6           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Styrene                   |                 | 0.1993    | 0.050  | 0.2       | 0           | 99.7           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Tetrachloroethene         |                 | 0.2211    | 0.050  | 0.2       | 0           | 111            | 70       | 130        | 0           | 0              | 0                     |      |  |
| Toluene                   |                 | 0.1981    | 0.050  | 0.2       | 0           | 99             | 70       | 130        | 0           | 0              | 0                     |      |  |
| trans-1,2-Dichloroethene  |                 | 0.1821    | 0.050  | 0.2       | 0           | 91             | 70       | 130        | 0           | 0              | 0                     |      |  |
| trans-1,3-Dichloropropene |                 | 0.2113    | 0.010  | 0.2       | 0           | 106            | 70       | 130        | 0           | 0              | 0                     |      |  |
| Trichloroethene           |                 | 0.1874    | 0.050  | 0.2       | 0           | 93.7           | 70       | 130        | 0           | 0              | 0                     |      |  |
| Vinyl chloride            |                 | 0.1815    | 0.020  | 0.2       | 0           | 90.8           | 70       | 130        | 0           | 0              | 0                     |      |  |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R83342

| Sample ID: 12090417-024AMS  | SampType: MS     | TestCode: VOC_W+ | Units: mg/L              | Prep Date:  |      |                | Run ID: VOA-7_120917A |             |        |          |      |
|-----------------------------|------------------|------------------|--------------------------|-------------|------|----------------|-----------------------|-------------|--------|----------|------|
| Client ID: ZZZZZ            | Batch ID: R83342 | TestNo: SW8260B  | Analysis Date: 9/17/2012 |             |      | SeqNo: 2243190 |                       |             |        |          |      |
| Analyte                     | Result           | PQL              | SPK value                | SPK Ref Val | %REC | LowLimit       | HighLimit             | RPD Ref Val | %RPD   | RPDLimit | Qual |
| Xylenes, Total              | 0.6727           | 0.15             | 0.6                      | 0           | 112  | 70             | 130                   | 0           | 0      |          |      |
| Sample ID: 12090417-024AMSD | SampType: MSD    | TestCode: VOC_W+ | Units: mg/L              | Prep Date:  |      |                | Run ID: VOA-7_120917A |             |        |          |      |
| Client ID: ZZZZZ            | Batch ID: R83342 | TestNo: SW8260B  | Analysis Date: 9/17/2012 |             |      | SeqNo: 2243191 |                       |             |        |          |      |
| Analyte                     | Result           | PQL              | SPK value                | SPK Ref Val | %REC | LowLimit       | HighLimit             | RPD Ref Val | %RPD   | RPDLimit | Qual |
| 1,1,1-Trichloroethane       | 0.178            | 0.050            | 0.2                      | 0           | 89   | 70             | 130                   | 0.1829      | 2.72   | 15       |      |
| 1,1,2,2-Tetrachloroethane   | 0.2001           | 0.050            | 0.2                      | 0           | 100  | 70             | 130                   | 0.1971      | 1.51   | 15       |      |
| 1,1,2-Trichloroethane       | 0.1967           | 0.050            | 0.2                      | 0           | 98.4 | 70             | 130                   | 0.2088      | 5.97   | 15       |      |
| 1,1-Dichloroethane          | 0.18             | 0.050            | 0.2                      | 0           | 90   | 70             | 130                   | 0.1776      | 1.34   | 15       |      |
| 1,1-Dichloroethene          | 0.1809           | 0.050            | 0.2                      | 0           | 90.4 | 70             | 130                   | 0.1811      | 0.110  | 15       |      |
| 1,2-Dichloroethane          | 0.1727           | 0.050            | 0.2                      | 0           | 86.4 | 70             | 130                   | 0.1772      | 2.57   | 15       |      |
| 1,2-Dichloropropane         | 0.1873           | 0.050            | 0.2                      | 0           | 93.6 | 70             | 130                   | 0.1906      | 1.75   | 15       |      |
| 2-Butanone                  | 0.3495           | 0.20             | 0.4                      | 0           | 87.4 | 70             | 130                   | 0.3437      | 1.67   | 15       |      |
| 2-Hexanone                  | 0.316            | 0.20             | 0.4                      | 0           | 79   | 70             | 130                   | 0.3258      | 3.05   | 15       |      |
| 4-Methyl-2-pentanone        | 0.3182           | 0.20             | 0.4                      | 0           | 79.6 | 70             | 130                   | 0.3131      | 1.62   | 15       |      |
| Acetone                     | 0.2589           | 0.20             | 0.4                      | 0           | 64.7 | 70             | 130                   | 0.2804      | 7.97   | 15       | S    |
| Benzene                     | 0.1965           | 0.050            | 0.2                      | 0           | 98.2 | 70             | 130                   | 0.1944      | 1.07   | 15       |      |
| Bromodichloromethane        | 0.1813           | 0.050            | 0.2                      | 0           | 90.7 | 70             | 130                   | 0.1833      | 1.10   | 15       |      |
| Bromoform                   | 0.1793           | 0.050            | 0.2                      | 0           | 89.6 | 70             | 130                   | 0.1839      | 2.53   | 15       |      |
| Bromomethane                | 0.1523           | 0.10             | 0.2                      | 0           | 76.2 | 70             | 130                   | 0.1524      | 0.0656 | 15       |      |
| Carbon disulfide            | 0.3852           | 0.10             | 0.4                      | 0           | 96.3 | 70             | 130                   | 0.4003      | 3.84   | 15       |      |
| Carbon tetrachloride        | 0.1751           | 0.050            | 0.2                      | 0           | 87.6 | 70             | 130                   | 0.1763      | 0.683  | 15       |      |
| Chlorobenzene               | 0.2219           | 0.050            | 0.2                      | 0           | 111  | 70             | 130                   | 0.2256      | 1.65   | 15       |      |
| Chloroethane                | 0.179            | 0.10             | 0.2                      | 0           | 89.5 | 70             | 130                   | 0.1792      | 0.112  | 15       |      |
| Chloroform                  | 0.1826           | 0.050            | 0.2                      | 0           | 91.3 | 70             | 130                   | 0.193       | 5.54   | 15       |      |
| Chloromethane               | 0.1874           | 0.10             | 0.2                      | 0           | 93.7 | 70             | 130                   | 0.192       | 2.42   | 15       |      |
| cis-1,2-Dichloroethene      | 0.1837           | 0.050            | 0.2                      | 0           | 91.8 | 70             | 130                   | 0.184       | 0.163  | 15       |      |
| cis-1,3-Dichloropropene     | 0.1784           | 0.010            | 0.2                      | 0           | 89.2 | 70             | 130                   | 0.179       | 0.336  | 15       |      |
| Dibromochloromethane        | 0.1996           | 0.050            | 0.2                      | 0           | 99.8 | 70             | 130                   | 0.2152      | 7.52   | 15       |      |
| Ethylbenzene                | 0.2036           | 0.050            | 0.2                      | 0           | 102  | 70             | 130                   | 0.2058      | 1.07   | 15       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R83342

| Sample ID: 12090417-024AMSD | SampType: MSD    | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          |           | Run ID: VOA-7_120917A |       |          |      |
|-----------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ            | Batch ID: R83342 | TestNo: SW8260B  |             | Analysis Date: 9/17/2012 |      |          |           | SeqNo: 2243191        |       |          |      |
| Analyte                     | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| Methyl tert-butyl ether     | 0.1712           | 0.050            | 0.2         | 0                        | 85.6 | 50       | 150       | 0.1794                | 4.68  | 15       |      |
| Methylene chloride          | 0.1761           | 0.050            | 0.2         | 0                        | 88   | 70       | 130       | 0.1732                | 1.66  | 15       |      |
| Styrene                     | 0.2003           | 0.050            | 0.2         | 0                        | 100  | 70       | 130       | 0.1993                | 0.501 | 15       |      |
| Tetrachloroethene           | 0.1966           | 0.050            | 0.2         | 0                        | 98.3 | 70       | 130       | 0.2211                | 11.7  | 15       |      |
| Toluene                     | 0.1821           | 0.050            | 0.2         | 0                        | 91   | 70       | 130       | 0.1981                | 8.42  | 15       |      |
| trans-1,2-Dichloroethene    | 0.1813           | 0.050            | 0.2         | 0                        | 90.7 | 70       | 130       | 0.1821                | 0.440 | 15       |      |
| trans-1,3-Dichloropropene   | 0.1955           | 0.010            | 0.2         | 0                        | 97.8 | 70       | 130       | 0.2113                | 7.77  | 15       |      |
| Trichloroethene             | 0.1822           | 0.050            | 0.2         | 0                        | 91.1 | 70       | 130       | 0.1874                | 2.81  | 15       |      |
| Vinyl chloride              | 0.1819           | 0.020            | 0.2         | 0                        | 91   | 70       | 130       | 0.1815                | 0.220 | 15       |      |
| Xylenes, Total              | 0.6589           | 0.15             | 0.6         | 0                        | 110  | 70       | 130       | 0.6727                | 2.07  | 15       |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R83375

| Sample ID: VBLK091812-7   | SampType: MBLK   | TestCode: VOC_W+ | Units: mg/L | Prep Date:               | Run ID: VOA-7_120918A |          |           |             |      |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R83375 | TestNo: SW8260B  |             | Analysis Date: 9/18/2012 | SeqNo: 2243214        |          |           |             |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC                  | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| 2-Butanone                | ND               | 0.020            |             |                          |                       |          |           |             |      |          |      |
| 2-Hexanone                | ND               | 0.020            |             |                          |                       |          |           |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 0.020            |             |                          |                       |          |           |             |      |          |      |
| Acetone                   | 0.00831          | 0.020            |             |                          |                       |          |           |             |      |          | J    |
| Benzene                   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Bromodichloromethane      | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Bromoform                 | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Bromomethane              | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| Carbon disulfide          | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Chlorobenzene             | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Chloroethane              | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| Chloroform                | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Chloromethane             | ND               | 0.010            |             |                          |                       |          |           |             |      |          |      |
| cis-1,2-Dichloroethene    | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| cis-1,3-Dichloropropene   | ND               | 0.0010           |             |                          |                       |          |           |             |      |          |      |
| Dibromochloromethane      | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Ethylbenzene              | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Methylene chloride        | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Styrene                   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Tetrachloroethene         | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| Toluene                   | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.0050           |             |                          |                       |          |           |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R83375

| Sample ID: VBLK091812-7   | SampType: MBLK   | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          | Run ID: VOA-7_120918A |             |      |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R83375 | TestNo: SW8260B  |             | Analysis Date: 9/18/2012 |      |          | SeqNo: 2243214        |             |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| trans-1,3-Dichloropropene | ND               | 0.0010           |             |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 0.0050           |             |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.0020           |             |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 0.015            |             |                          |      |          |                       |             |      |          |      |

| Sample ID: VLCS091812-7   | SampType: LCS    | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          | Run ID: VOA-7_120918A |             |      |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R83375 | TestNo: SW8260B  |             | Analysis Date: 9/18/2012 |      |          | SeqNo: 2243219        |             |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 0.01994          | 0.0050           | 0.02        | 0                        | 99.7 | 70       | 130                   | 0           | 0    |          |      |
| 1,1,2,2-Tetrachloroethane | 0.01963          | 0.0050           | 0.02        | 0                        | 98.2 | 70       | 130                   | 0           | 0    |          |      |
| 1,1,2-Trichloroethane     | 0.0201           | 0.0050           | 0.02        | 0                        | 100  | 70       | 130                   | 0           | 0    |          |      |
| 1,1-Dichloroethane        | 0.01958          | 0.0050           | 0.02        | 0                        | 97.9 | 70       | 130                   | 0           | 0    |          |      |
| 1,1-Dichloroethene        | 0.0196           | 0.0050           | 0.02        | 0                        | 98   | 70       | 130                   | 0           | 0    |          |      |
| 1,2-Dichloroethane        | 0.01834          | 0.0050           | 0.02        | 0                        | 91.7 | 70       | 130                   | 0           | 0    |          |      |
| 1,2-Dichloropropane       | 0.02081          | 0.0050           | 0.02        | 0                        | 104  | 70       | 130                   | 0           | 0    |          |      |
| 2-Butanone                | 0.03814          | 0.020            | 0.04        | 0                        | 95.4 | 70       | 130                   | 0           | 0    |          |      |
| 2-Hexanone                | 0.03284          | 0.020            | 0.04        | 0                        | 82.1 | 70       | 130                   | 0           | 0    |          |      |
| 4-Methyl-2-pentanone      | 0.03242          | 0.020            | 0.04        | 0                        | 81   | 70       | 130                   | 0           | 0    |          |      |
| Acetone                   | 0.0288           | 0.020            | 0.04        | 0.00831                  | 51.2 | 50       | 150                   | 0           | 0    |          |      |
| Benzene                   | 0.0216           | 0.0050           | 0.02        | 0                        | 108  | 70       | 130                   | 0           | 0    |          |      |
| Bromodichloromethane      | 0.01964          | 0.0050           | 0.02        | 0                        | 98.2 | 70       | 130                   | 0           | 0    |          |      |
| Bromoform                 | 0.01959          | 0.0050           | 0.02        | 0                        | 98   | 70       | 130                   | 0           | 0    |          |      |
| Bromomethane              | 0.01681          | 0.010            | 0.02        | 0                        | 84   | 70       | 130                   | 0           | 0    |          |      |
| Carbon disulfide          | 0.04295          | 0.010            | 0.04        | 0                        | 107  | 70       | 130                   | 0           | 0    |          |      |
| Carbon tetrachloride      | 0.01952          | 0.0050           | 0.02        | 0                        | 97.6 | 70       | 130                   | 0           | 0    |          |      |
| Chlorobenzene             | 0.02378          | 0.0050           | 0.02        | 0                        | 119  | 70       | 130                   | 0           | 0    |          |      |
| Chloroethane              | 0.01964          | 0.010            | 0.02        | 0                        | 98.2 | 70       | 130                   | 0           | 0    |          |      |
| Chloroform                | 0.02114          | 0.0050           | 0.02        | 0                        | 106  | 70       | 130                   | 0           | 0    |          |      |
| Chloromethane             | 0.02099          | 0.010            | 0.02        | 0                        | 105  | 70       | 130                   | 0           | 0    |          |      |
| cis-1,2-Dichloroethene    | 0.01992          | 0.0050           | 0.02        | 0                        | 99.6 | 70       | 130                   | 0           | 0    |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

|                    |                            |                                     |  |  |  |  |  |  |  |  |  |
|--------------------|----------------------------|-------------------------------------|--|--|--|--|--|--|--|--|--|
| <b>CLIENT:</b>     | Terracon Consultants, Inc. | <b>ANALYTICAL QC SUMMARY REPORT</b> |  |  |  |  |  |  |  |  |  |
| <b>Work Order:</b> | 12090402                   |                                     |  |  |  |  |  |  |  |  |  |
| <b>Project:</b>    | A2107017-7A, DOE-Kimball   |                                     |  |  |  |  |  |  |  |  |  |

| Sample ID: VLCS091812-7   | SampType: LCS    | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          |           | Run ID: VOA-7_120918A |      |          |      |
|---------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R83375 | TestNo: SW8260B  |             | Analysis Date: 9/18/2012 |      |          |           | SeqNo: 2243219        |      |          |      |
| Analyte                   | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| cis-1,3-Dichloropropene   | 0.01943          | 0.0010           | 0.02        | 0                        | 97.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Dibromochloromethane      | 0.0211           | 0.0050           | 0.02        | 0                        | 106  | 70       | 130       | 0                     | 0    | 0        |      |
| Ethylbenzene              | 0.02187          | 0.0050           | 0.02        | 0                        | 109  | 70       | 130       | 0                     | 0    | 0        |      |
| Methyl tert-butyl ether   | 0.01867          | 0.0050           | 0.02        | 0                        | 93.4 | 50       | 150       | 0                     | 0    | 0        |      |
| Methylene chloride        | 0.01822          | 0.0050           | 0.02        | 0                        | 91.1 | 70       | 130       | 0                     | 0    | 0        |      |
| Styrene                   | 0.02157          | 0.0050           | 0.02        | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrachloroethene         | 0.02208          | 0.0050           | 0.02        | 0                        | 110  | 70       | 130       | 0                     | 0    | 0        |      |
| Toluene                   | 0.02122          | 0.0050           | 0.02        | 0                        | 106  | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,2-Dichloroethene  | 0.02055          | 0.0050           | 0.02        | 0                        | 103  | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,3-Dichloropropene | 0.02033          | 0.0010           | 0.02        | 0                        | 102  | 70       | 130       | 0                     | 0    | 0        |      |
| Trichloroethene           | 0.02049          | 0.0050           | 0.02        | 0                        | 102  | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl chloride            | 0.01936          | 0.0020           | 0.02        | 0                        | 96.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Xylenes, Total            | 0.06988          | 0.015            | 0.06        | 0                        | 116  | 70       | 130       | 0                     | 0    | 0        |      |

| Sample ID: 12090402-003AMS | SampType: MS     | TestCode: VOC_W+ | Units: mg/L | Prep Date:               |      |          |           | Run ID: VOA-7_120918A |      |          |      |
|----------------------------|------------------|------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: GW-MW-05        | Batch ID: R83375 | TestNo: SW8260B  |             | Analysis Date: 9/18/2012 |      |          |           | SeqNo: 2243305        |      |          |      |
| Analyte                    | Result           | PQL              | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane      | 0.01878          | 0.0050           | 0.02        | 0                        | 93.9 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1,2,2-Tetrachloroethane  | 0.02047          | 0.0050           | 0.02        | 0                        | 102  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1,2-Trichloroethane      | 0.02066          | 0.0050           | 0.02        | 0                        | 103  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1-Dichloroethane         | 0.01799          | 0.0050           | 0.02        | 0                        | 90   | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1-Dichloroethene         | 0.01854          | 0.0050           | 0.02        | 0                        | 92.7 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dichloroethane         | 0.0181           | 0.0050           | 0.02        | 0                        | 90.5 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dichloropropane        | 0.01955          | 0.0050           | 0.02        | 0                        | 97.8 | 70       | 130       | 0                     | 0    | 0        |      |
| 2-Butanone                 | 0.04223          | 0.020            | 0.04        | 0                        | 106  | 70       | 130       | 0                     | 0    | 0        |      |
| 2-Hexanone                 | 0.03634          | 0.020            | 0.04        | 0                        | 90.8 | 70       | 130       | 0                     | 0    | 0        |      |
| 4-Methyl-2-pentanone       | 0.03307          | 0.020            | 0.04        | 0                        | 82.7 | 70       | 130       | 0                     | 0    | 0        |      |
| Acetone                    | 0.02771          | 0.020            | 0.04        | 0                        | 69.3 | 70       | 130       | 0                     | 0    | 0        | S    |
| Benzene                    | 0.02029          | 0.0050           | 0.02        | 0                        | 101  | 70       | 130       | 0                     | 0    | 0        |      |
| Bromodichloromethane       | 0.01896          | 0.0050           | 0.02        | 0                        | 94.8 | 70       | 130       | 0                     | 0    | 0        |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R83375

| Sample ID:                | 12090402-003AMS | SampType: | MS     | TestCode: | VOC_W+      | Units: | mg/L     | Prep Date: |                |           | Run ID: VOA-7_120918A |      |  |
|---------------------------|-----------------|-----------|--------|-----------|-------------|--------|----------|------------|----------------|-----------|-----------------------|------|--|
| Client ID:                | GW-MW-05        | Batch ID: | R83375 | TestNo:   | SW8260B     |        |          |            | Analysis Date: | 9/18/2012 | SeqNo: 2243305        |      |  |
| Analyte                   |                 | Result    | PQL    | SPK value | SPK Ref Val | %REC   | LowLimit | HighLimit  | RPD Ref Val    | %RPD      | RPDLimit              | Qual |  |
| Bromoform                 |                 | 0.01964   | 0.0050 | 0.02      | 0           | 98.2   | 70       | 130        | 0              | 0         | 0                     |      |  |
| Bromomethane              |                 | 0.01554   | 0.010  | 0.02      | 0           | 77.7   | 70       | 130        | 0              | 0         | 0                     |      |  |
| Carbon disulfide          |                 | 0.04124   | 0.010  | 0.04      | 0           | 103    | 70       | 130        | 0              | 0         | 0                     |      |  |
| Carbon tetrachloride      |                 | 0.01822   | 0.0050 | 0.02      | 0           | 91.1   | 70       | 130        | 0              | 0         | 0                     |      |  |
| Chlorobenzene             |                 | 0.02268   | 0.0050 | 0.02      | 0           | 113    | 70       | 130        | 0              | 0         | 0                     |      |  |
| Chloroethane              |                 | 0.01858   | 0.010  | 0.02      | 0           | 92.9   | 70       | 130        | 0              | 0         | 0                     |      |  |
| Chloroform                |                 | 0.01944   | 0.0050 | 0.02      | 0           | 97.2   | 70       | 130        | 0              | 0         | 0                     |      |  |
| Chloromethane             |                 | 0.01874   | 0.010  | 0.02      | 0           | 93.7   | 70       | 130        | 0              | 0         | 0                     |      |  |
| cis-1,2-Dichloroethene    |                 | 0.0192    | 0.0050 | 0.02      | 0           | 96     | 70       | 130        | 0              | 0         | 0                     |      |  |
| cis-1,3-Dichloropropene   |                 | 0.01813   | 0.0010 | 0.02      | 0           | 90.7   | 70       | 130        | 0              | 0         | 0                     |      |  |
| Dibromochloromethane      |                 | 0.02048   | 0.0050 | 0.02      | 0           | 102    | 70       | 130        | 0              | 0         | 0                     |      |  |
| Ethylbenzene              |                 | 0.02079   | 0.0050 | 0.02      | 0           | 104    | 70       | 130        | 0              | 0         | 0                     |      |  |
| Methyl tert-butyl ether   |                 | 0.01872   | 0.0050 | 0.02      | 0           | 93.6   | 50       | 150        | 0              | 0         | 0                     |      |  |
| Methylene chloride        |                 | 0.01824   | 0.0050 | 0.02      | 0           | 91.2   | 70       | 130        | 0              | 0         | 0                     |      |  |
| Styrene                   |                 | 0.02047   | 0.0050 | 0.02      | 0           | 102    | 70       | 130        | 0              | 0         | 0                     |      |  |
| Tetrachloroethene         |                 | 0.02045   | 0.0050 | 0.02      | 0           | 102    | 70       | 130        | 0              | 0         | 0                     |      |  |
| Toluene                   |                 | 0.02031   | 0.0050 | 0.02      | 0           | 102    | 70       | 130        | 0              | 0         | 0                     |      |  |
| trans-1,2-Dichloroethene  |                 | 0.01877   | 0.0050 | 0.02      | 0           | 93.8   | 70       | 130        | 0              | 0         | 0                     |      |  |
| trans-1,3-Dichloropropene |                 | 0.02043   | 0.0010 | 0.02      | 0           | 102    | 70       | 130        | 0              | 0         | 0                     |      |  |
| Trichloroethene           |                 | 0.02009   | 0.0050 | 0.02      | 0           | 100    | 70       | 130        | 0              | 0         | 0                     |      |  |
| Vinyl chloride            |                 | 0.01764   | 0.0020 | 0.02      | 0           | 88.2   | 70       | 130        | 0              | 0         | 0                     |      |  |
| Xylenes, Total            |                 | 0.06722   | 0.015  | 0.06      | 0           | 112    | 70       | 130        | 0              | 0         | 0                     |      |  |

| Sample ID:                | 12090402-003AMSD | SampType: | MSD    | TestCode: | VOC_W+      | Units: | mg/L     | Prep Date: |                |           | Run ID: VOA-7_120918A |      |  |
|---------------------------|------------------|-----------|--------|-----------|-------------|--------|----------|------------|----------------|-----------|-----------------------|------|--|
| Client ID:                | GW-MW-05         | Batch ID: | R83375 | TestNo:   | SW8260B     |        |          |            | Analysis Date: | 9/18/2012 | SeqNo: 2243306        |      |  |
| Analyte                   |                  | Result    | PQL    | SPK value | SPK Ref Val | %REC   | LowLimit | HighLimit  | RPD Ref Val    | %RPD      | RPDLimit              | Qual |  |
| 1,1,1-Trichloroethane     |                  | 0.01919   | 0.0050 | 0.02      | 0           | 96     | 70       | 130        | 0.01878        | 2.16      | 15                    |      |  |
| 1,1,2,2-Tetrachloroethane |                  | 0.02041   | 0.0050 | 0.02      | 0           | 102    | 70       | 130        | 0.02047        | 0.294     | 15                    |      |  |
| 1,1,2-Trichloroethane     |                  | 0.02022   | 0.0050 | 0.02      | 0           | 101    | 70       | 130        | 0.02066        | 2.15      | 15                    |      |  |
| 1,1-Dichloroethane        |                  | 0.01829   | 0.0050 | 0.02      | 0           | 91.4   | 70       | 130        | 0.01799        | 1.65      | 15                    |      |  |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12090402  
**Project:** A2107017-7A, DOE-Kimball

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R83375**

| Sample ID:                | 12090402-003AMSD | SampType: | MSD       | TestCode:   | VOC_W+  | Units:         | mg/L      | Prep Date:  |           |                | Run ID: VOA-7_120918A |  |  |
|---------------------------|------------------|-----------|-----------|-------------|---------|----------------|-----------|-------------|-----------|----------------|-----------------------|--|--|
| Client ID:                | GW-MW-05         | Batch ID: | R83375    | TestNo:     | SW8260B | Analysis Date: |           |             | 9/18/2012 | SeqNo: 2243306 |                       |  |  |
| Analyte                   | Result           | PQL       | SPK value | SPK Ref Val | %REC    | LowLimit       | HighLimit | RPD Ref Val | %RPD      | RPDLimit       | Qual                  |  |  |
| 1,1-Dichloroethene        | 0.01928          | 0.0050    | 0.02      | 0           | 96.4    | 70             | 130       | 0.01854     | 3.91      | 15             |                       |  |  |
| 1,2-Dichloroethane        | 0.01821          | 0.0050    | 0.02      | 0           | 91      | 70             | 130       | 0.0181      | 0.606     | 15             |                       |  |  |
| 1,2-Dichloropropane       | 0.01935          | 0.0050    | 0.02      | 0           | 96.8    | 70             | 130       | 0.01955     | 1.03      | 15             |                       |  |  |
| 2-Butanone                | 0.03837          | 0.020     | 0.04      | 0           | 95.9    | 70             | 130       | 0.04223     | 9.58      | 15             |                       |  |  |
| 2-Hexanone                | 0.0352           | 0.020     | 0.04      | 0           | 88      | 70             | 130       | 0.03634     | 3.19      | 15             |                       |  |  |
| 4-Methyl-2-pentanone      | 0.03374          | 0.020     | 0.04      | 0           | 84.4    | 70             | 130       | 0.03307     | 2.01      | 15             |                       |  |  |
| Acetone                   | 0.02756          | 0.020     | 0.04      | 0           | 68.9    | 70             | 130       | 0.02771     | 0.543     | 15             | S                     |  |  |
| Benzene                   | 0.0203           | 0.0050    | 0.02      | 0           | 102     | 70             | 130       | 0.02029     | 0.0493    | 15             |                       |  |  |
| Bromodichloromethane      | 0.01869          | 0.0050    | 0.02      | 0           | 93.4    | 70             | 130       | 0.01896     | 1.43      | 15             |                       |  |  |
| Bromoform                 | 0.01925          | 0.0050    | 0.02      | 0           | 96.2    | 70             | 130       | 0.01964     | 2.01      | 15             |                       |  |  |
| Bromomethane              | 0.01525          | 0.010     | 0.02      | 0           | 76.2    | 70             | 130       | 0.01554     | 1.88      | 15             |                       |  |  |
| Carbon disulfide          | 0.04172          | 0.010     | 0.04      | 0           | 104     | 70             | 130       | 0.04124     | 1.16      | 15             |                       |  |  |
| Carbon tetrachloride      | 0.01888          | 0.0050    | 0.02      | 0           | 94.4    | 70             | 130       | 0.01822     | 3.56      | 15             |                       |  |  |
| Chlorobenzene             | 0.02256          | 0.0050    | 0.02      | 0           | 113     | 70             | 130       | 0.02268     | 0.531     | 15             |                       |  |  |
| Chloroethane              | 0.01836          | 0.010     | 0.02      | 0           | 91.8    | 70             | 130       | 0.01858     | 1.19      | 15             |                       |  |  |
| Chloroform                | 0.01982          | 0.0050    | 0.02      | 0           | 99.1    | 70             | 130       | 0.01944     | 1.94      | 15             |                       |  |  |
| Chloromethane             | 0.02024          | 0.010     | 0.02      | 0           | 101     | 70             | 130       | 0.01874     | 7.70      | 15             |                       |  |  |
| cis-1,2-Dichloroethene    | 0.01979          | 0.0050    | 0.02      | 0           | 99      | 70             | 130       | 0.0192      | 3.03      | 15             |                       |  |  |
| cis-1,3-Dichloropropene   | 0.01876          | 0.0010    | 0.02      | 0           | 93.8    | 70             | 130       | 0.01813     | 3.42      | 15             |                       |  |  |
| Dibromochloromethane      | 0.0205           | 0.0050    | 0.02      | 0           | 103     | 70             | 130       | 0.02048     | 0.0976    | 15             |                       |  |  |
| Ethylbenzene              | 0.02089          | 0.0050    | 0.02      | 0           | 104     | 70             | 130       | 0.02079     | 0.480     | 15             |                       |  |  |
| Methyl tert-butyl ether   | 0.01885          | 0.0050    | 0.02      | 0           | 94.2    | 50             | 150       | 0.01872     | 0.692     | 15             |                       |  |  |
| Methylene chloride        | 0.01834          | 0.0050    | 0.02      | 0           | 91.7    | 70             | 130       | 0.01824     | 0.547     | 15             |                       |  |  |
| Styrene                   | 0.01986          | 0.0050    | 0.02      | 0           | 99.3    | 70             | 130       | 0.02047     | 3.03      | 15             |                       |  |  |
| Tetrachloroethene         | 0.02083          | 0.0050    | 0.02      | 0           | 104     | 70             | 130       | 0.02045     | 1.84      | 15             |                       |  |  |
| Toluene                   | 0.02016          | 0.0050    | 0.02      | 0           | 101     | 70             | 130       | 0.02031     | 0.741     | 15             |                       |  |  |
| trans-1,2-Dichloroethene  | 0.01915          | 0.0050    | 0.02      | 0           | 95.8    | 70             | 130       | 0.01877     | 2.00      | 15             |                       |  |  |
| trans-1,3-Dichloropropene | 0.02017          | 0.0010    | 0.02      | 0           | 101     | 70             | 130       | 0.02043     | 1.28      | 15             |                       |  |  |
| Trichloroethene           | 0.02006          | 0.0050    | 0.02      | 0           | 100     | 70             | 130       | 0.02009     | 0.149     | 15             |                       |  |  |
| Vinyl chloride            | 0.01844          | 0.0020    | 0.02      | 0           | 92.2    | 70             | 130       | 0.01764     | 4.43      | 15             |                       |  |  |
| Xylenes, Total            | 0.06805          | 0.015     | 0.06      | 0           | 113     | 70             | 130       | 0.06722     | 1.23      | 15             |                       |  |  |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

# **STAT** Analysis Corporation

*2242 West Harrison St., Suite 200, Chicago, IL 60612-3766*

*Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com*

*Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-*

December 31, 2012

Terracon Consultants, Inc.  
650 W. Lake Street  
Suite 420  
Chicago, IL 60661  
Telephone: (312) 575-0014  
Fax: (312) 575-0111

RE: A2107017-7A, DOE-Kimball, Chicago, IL

STAT Project No 12080703

Dear Tom Tucker:

STAT Analysis received 8 samples for the referenced project on 8/21/2012 5:00:00 PM. The analytical results are presented in the following report.

This report is revised to reflect changes made after the initial report was issued.

All analyses were performed in accordance with the requirements of 35 IAC part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Kurt Clarkson

Senior Project Manager

*The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.*

**STAT Analysis Corporation****Date:** December 31, 2012

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**Client:** Terracon Consultants, Inc.  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab Order:** 12080703

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**Work Order Sample Summary**

| <b>Lab Sample ID</b> | <b>Client Sample ID</b> | <b>Tag Number</b> | <b>Collection Date</b> | <b>Date Received</b> |
|----------------------|-------------------------|-------------------|------------------------|----------------------|
| 12080703-001A        | SV-01                   |                   | 8/21/2012 12:45:00 PM  | 8/21/2012            |
| 12080703-002A        | SV-02                   |                   | 8/21/2012 1:19:00 PM   | 8/21/2012            |
| 12080703-003A        | SV-03                   |                   | 8/21/2012 2:20:00 PM   | 8/21/2012            |
| 12080703-004A        | SV-04                   |                   | 8/21/2012 2:46:00 PM   | 8/21/2012            |
| 12080703-005A        | SV-04-DUP               |                   | 8/21/2012 2:46:00 PM   | 8/21/2012            |
| 12080703-006A        | SV-05                   |                   | 8/21/2012 3:25:00 PM   | 8/21/2012            |
| 12080703-007A        | SV-06                   |                   | 8/21/2012 4:00:00 PM   | 8/21/2012            |
| 12080703-008A        | Field Blank             |                   | 8/21/2012              | 8/21/2012            |

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**CLIENT:** Terracon Consultants, Inc.  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab Order:** 12080703

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**CASE NARRATIVE**

The TO-15 LCS/LCSD analyzed 8/27/12 had the following outside of control limits:

1,1,2,2-Tetrachloroethane: 139/133% (LCS/LCSD) recovery (QC Limits 70-130%), not detected in the sample

2-Hexanone: 134% (LCS) recovery (QC Limits 70-130%), not detected in the sample

Heptane: 144/140% (LCS/LCSD) recovery (QC Limits 70-130%), not detected in the sample

Tetrahydrofuran: 130% (LCS) recovery (QC Limits 70-130%), not detected in the sample

The TO-15 LCS/LCSD analyzed 8/28/12 had the following outside of control limits:

Hexane: 138/139% (LCS/LCSD) recovery (QC Limits 70-130%)

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**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-001

**Client Sample ID:** SV-01**Collection Date** 8/21/2012 12:45:00 PM**Matrix:** Air

| Analyses  | Result | RL    | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|-------|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |       |           |       |                      |               |
|   |        | TO-15 |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,1,1-Trichloroethane                             | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1,2,2-Tetrachloroethane                         | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1,2-Trichloroethane                             | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1-Dichloroethane                                | 0.36   | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1-Dichloroethene                                | 12     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2,4-Trichlorobenzene                            | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2,4-Trimethylbenzene                            | 0.9    | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dibromoethane                                 | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichlorobenzene                               | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichloroethane                                | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichloropropane                               | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3,5-Trimethylbenzene                            | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3-Butadiene                                     | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3-Dichlorobenzene                               | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,4-Dichlorobenzene                               | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 1,4-Dioxane                                       | ND     | 0.85  |           | ppbv  | 1                    | 8/24/2012     |
| 2-Butanone  | 3.5    | 0.85  |           | ppbv  | 1                    | 8/24/2012     |
| 2-Hexanone  | ND     | 1.7   |           | ppbv  | 1                    | 8/24/2012     |
| 4-Ethyltoluene                                    | 0.37   | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| 4-Methyl-2-pentanone                              | ND     | 1.7   |           | ppbv  | 1                    | 8/24/2012     |
| Acetone   | 27     | 3.4   | *         | ppbv  | 1                    | 8/24/2012     |
| Benzene   | 1.1    | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| Benzyl chloride                                   | ND     | 0.85  |           | ppbv  | 1                    | 8/24/2012     |
| Bromodichloromethane                              | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| Bromoform   | ND     | 0.85  |           | ppbv  | 1                    | 8/24/2012     |
| Bromomethane                                      | ND     | 0.85  |           | ppbv  | 1                    | 8/24/2012     |
| Carbon disulfide                                  | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| Carbon tetrachloride                              | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| Chlorobenzene                                     | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| Chloroethane                                      | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| Chloroform  | 0.75   | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| Chloromethane                                     | ND     | 0.85  |           | ppbv  | 1                    | 8/24/2012     |
| cis-1,2-Dichloroethene                            | 1200   | 8.5   |           | ppbv  | 25                   | 8/25/2012     |
| cis-1,3-Dichloropropene                           | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| Cyclohexane                                       | 0.54   | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| Dibromochloromethane                              | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| Dichlorodifluoromethane                           | 0.48   | 0.34  |           | ppbv  | 1                    | 8/24/2012     |
| Ethyl acetate                                     | ND     | 0.34  |           | ppbv  | 1                    | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-001

**Client Sample ID:** SV-01

**Collection Date** 8/21/2012 12:45:00 PM

**Matrix:** Air

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|----------|--------|----|-----------|-------|----|---------------|
|----------|--------|----|-----------|-------|----|---------------|

|   |              |      |  |                             |     |                    |
|---|--------------|------|--|-----------------------------|-----|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> | <b>TO-15</b> |      |  | Prep Date: <b>8/23/2012</b> |     | Analyst: <b>VP</b> |
| Ethylbenzene                                      | 0.8          | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| Freon-113   | ND           | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| Freon-114   | ND           | 1.7  |  | ppbv                        | 1   | 8/24/2012          |
| Heptane   | 0.56         | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| Hexachlorobutadiene                               | ND           | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| Hexane  | 1            | 0.85 |  | ppbv                        | 1   | 8/24/2012          |
| Isopropyl Alcohol                                 | ND           | 1.7  |  | ppbv                        | 1   | 8/24/2012          |
| m,p-Xylene  | 2.9          | 0.68 |  | ppbv                        | 1   | 8/24/2012          |
| Methyl tert-butyl ether                           | ND           | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| Methylene chloride                                | ND           | 3.4  |  | ppbv                        | 1   | 8/24/2012          |
| o-Xylene  | 0.9          | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| Propene   | 4.4          | 3.4  |  | ppbv                        | 1   | 8/24/2012          |
| Styrene   | ND           | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| Tetrachloroethene                                 | 10           | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| Tetrahydrofuran                                   | ND           | 0.85 |  | ppbv                        | 1   | 8/24/2012          |
| Toluene   | 4.4          | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| trans-1,2-Dichloroethene                          | 46           | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| trans-1,3-Dichloropropene                         | ND           | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| Trichloroethene                                   | 3200         | 68   |  | ppbv                        | 200 | 8/28/2012          |
| Trichlorofluoromethane                            | ND           | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| Vinyl acetate                                     | ND           | 3.4  |  | ppbv                        | 1   | 8/24/2012          |
| Vinyl chloride                                    | 5.2          | 0.34 |  | ppbv                        | 1   | 8/24/2012          |
| Xylenes, Total                                    | 3.8          | 1    |  | ppbv                        | 1   | 8/24/2012          |

|   |              |      |                             |                    |           |
|---|--------------|------|-----------------------------|--------------------|-----------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> | <b>TO-15</b> |      | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |           |
| 1,1,1-Trichloroethane                             | ND           | 1.9  | µg/m³                       | 1                  | 8/24/2012 |
| 1,1,2,2-Tetrachloroethane                         | ND           | 2.4  | µg/m³                       | 1                  | 8/24/2012 |
| 1,1,2-Trichloroethane                             | ND           | 1.9  | µg/m³                       | 1                  | 8/24/2012 |
| 1,1-Dichloroethane                                | 1.4          | 1.4  | µg/m³                       | 1                  | 8/24/2012 |
| 1,1-Dichloroethene                                | 48           | 1.4  | µg/m³                       | 1                  | 8/24/2012 |
| 1,2,4-Trichlorobenzene                            | ND           | 2.5  | µg/m³                       | 1                  | 8/24/2012 |
| 1,2,4-Trimethylbenzene                            | 4.4          | 1.7  | µg/m³                       | 1                  | 8/24/2012 |
| 1,2-Dibromoethane                                 | ND           | 2.5  | µg/m³                       | 1                  | 8/24/2012 |
| 1,2-Dichlorobenzene                               | ND           | 2    | µg/m³                       | 1                  | 8/24/2012 |
| 1,2-Dichloroethane                                | ND           | 1.4  | µg/m³                       | 1                  | 8/24/2012 |
| 1,2-Dichloropropane                               | ND           | 1.5  | µg/m³                       | 1                  | 8/24/2012 |
| 1,3,5-Trimethylbenzene                            | ND           | 1.7  | µg/m³                       | 1                  | 8/24/2012 |
| 1,3-Butadiene                                     | ND           | 0.68 | µg/m³                       | 1                  | 8/24/2012 |
| 1,3-Dichlorobenzene                               | ND           | 2    | µg/m³                       | 1                  | 8/24/2012 |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

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H - Holding time exceeded

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Date Reported: December 31, 2012

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**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-001

**Client Sample ID:** SV-01

**Collection Date** 8/21/2012 12:45:00 PM

**Matrix:** Air

| Analyses  | Result | RL   | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|------|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |      |           |       |                      |               |
|   | TO-15  |      |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,4-Dichlorobenzene                               | ND     | 2    |           | µg/m³ | 1                    | 8/24/2012     |
| 1,4-Dioxane                                       | ND     | 3.1  |           | µg/m³ | 1                    | 8/24/2012     |
| 2-Butanone  | 10     | 2.5  |           | µg/m³ | 1                    | 8/24/2012     |
| 2-Hexanone  | ND     | 7    |           | µg/m³ | 1                    | 8/24/2012     |
| 4-Ethyltoluene                                    | 1.8    | 1.7  |           | µg/m³ | 1                    | 8/24/2012     |
| 4-Methyl-2-pentanone                              | ND     | 7    |           | µg/m³ | 1                    | 8/24/2012     |
| Acetone   | 63     | 8.1  | *         | µg/m³ | 1                    | 8/24/2012     |
| Benzene   | 3.6    | 1    |           | µg/m³ | 1                    | 8/24/2012     |
| Benzyl chloride                                   | ND     | 4.4  |           | µg/m³ | 1                    | 8/24/2012     |
| Bromodichloromethane                              | ND     | 2.2  |           | µg/m³ | 1                    | 8/24/2012     |
| Bromoform   | ND     | 8.8  |           | µg/m³ | 1                    | 8/24/2012     |
| Bromomethane                                      | ND     | 3.2  |           | µg/m³ | 1                    | 8/24/2012     |
| Carbon disulfide                                  | ND     | 1.1  |           | µg/m³ | 1                    | 8/24/2012     |
| Carbon tetrachloride                              | ND     | 2.2  |           | µg/m³ | 1                    | 8/24/2012     |
| Chlorobenzene                                     | ND     | 1.5  |           | µg/m³ | 1                    | 8/24/2012     |
| Chloroethane                                      | ND     | 0.85 |           | µg/m³ | 1                    | 8/24/2012     |
| Chloroform  | 3.6    | 1.7  |           | µg/m³ | 1                    | 8/24/2012     |
| Chloromethane                                     | ND     | 1.7  |           | µg/m³ | 1                    | 8/24/2012     |
| cis-1,2-Dichloroethene                            | 4700   | 34   |           | µg/m³ | 25                   | 8/25/2012     |
| cis-1,3-Dichloropropene                           | ND     | 1.5  |           | µg/m³ | 1                    | 8/24/2012     |
| Cyclohexane                                       | 1.9    | 1.2  |           | µg/m³ | 1                    | 8/24/2012     |
| Dibromochloromethane                              | ND     | 2.9  |           | µg/m³ | 1                    | 8/24/2012     |
| Dichlorodifluoromethane                           | 2.4    | 1.7  |           | µg/m³ | 1                    | 8/24/2012     |
| Ethyl acetate                                     | ND     | 1.2  |           | µg/m³ | 1                    | 8/24/2012     |
| Ethylbenzene                                      | 3.5    | 1.5  |           | µg/m³ | 1                    | 8/24/2012     |
| Freon-113   | ND     | 2.5  |           | µg/m³ | 1                    | 8/24/2012     |
| Freon-114   | ND     | 12   |           | µg/m³ | 1                    | 8/24/2012     |
| Heptane   | 2.3    | 1.4  |           | µg/m³ | 1                    | 8/24/2012     |
| Hexachlorobutadiene                               | ND     | 3.6  |           | µg/m³ | 1                    | 8/24/2012     |
| Hexane  | 3.5    | 3.1  |           | µg/m³ | 1                    | 8/24/2012     |
| Isopropyl Alcohol                                 | ND     | 4.2  |           | µg/m³ | 1                    | 8/24/2012     |
| m,p-Xylene  | 12     | 2.9  |           | µg/m³ | 1                    | 8/24/2012     |
| Methyl tert-butyl ether                           | ND     | 1.2  |           | µg/m³ | 1                    | 8/24/2012     |
| Methylene chloride                                | ND     | 12   |           | µg/m³ | 1                    | 8/24/2012     |
| o-Xylene  | 3.9    | 1.5  |           | µg/m³ | 1                    | 8/24/2012     |
| Propene   | 7.6    | 5.8  |           | µg/m³ | 1                    | 8/24/2012     |
| Styrene   | ND     | 1.5  |           | µg/m³ | 1                    | 8/24/2012     |
| Tetrachloroethene                                 | 70     | 2.4  |           | µg/m³ | 1                    | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-001

**Client Sample ID:** SV-01**Collection Date** 8/21/2012 12:45:00 PM**Matrix:** Air

| Analyses  | Result | RL   | Qualifier | Units | DF  | Date Analyzed |
|---|--------|------|-----------|-------|-----|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> <b>TO-15</b> Prep Date: <b>8/23/2012</b> Analyst: <b>VP</b> |        |      |           |       |     |               |
| Tetrahydrofuran   | ND     | 2.5  |           | µg/m³ | 1   | 8/24/2012     |
| Toluene   | 16     | 1.4  |           | µg/m³ | 1   | 8/24/2012     |
| trans-1,2-Dichloroethene  | 180    | 1.4  |           | µg/m³ | 1   | 8/24/2012     |
| trans-1,3-Dichloropropene   | ND     | 1.5  |           | µg/m³ | 1   | 8/24/2012     |
| Trichloroethene   | 17000  | 370  |           | µg/m³ | 200 | 8/28/2012     |
| Trichlorofluoromethane  | ND     | 1.9  |           | µg/m³ | 1   | 8/24/2012     |
| Vinyl acetate   | ND     | 12   |           | µg/m³ | 1   | 8/24/2012     |
| Vinyl chloride  | 13     | 0.85 |           | µg/m³ | 1   | 8/24/2012     |
| Xylenes, Total  | 16     | 4.4  |           | µg/m³ | 1   | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-002

**Client Sample ID:** SV-02

**Collection Date** 8/21/2012 1:19:00 PM

**Matrix:** Air

| Analyses  | Result | RL    | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|-------|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |       |           |       |                      |               |
|   |        | TO-15 |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,1,1-Trichloroethane                             | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1,2,2-Tetrachloroethane                         | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1,2-Trichloroethane                             | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1-Dichloroethane                                | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1-Dichloroethene                                | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2,4-Trichlorobenzene                            | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2,4-Trimethylbenzene                            | 0.7    | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dibromoethane                                 | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichlorobenzene                               | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichloroethane                                | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichloropropane                               | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3,5-Trimethylbenzene                            | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3-Butadiene                                     | 0.88   | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3-Dichlorobenzene                               | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,4-Dichlorobenzene                               | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,4-Dioxane                                       | ND     | 0.9   |           | ppbv  | 1                    | 8/24/2012     |
| 2-Butanone  | 2.4    | 0.9   |           | ppbv  | 1                    | 8/24/2012     |
| 2-Hexanone  | ND     | 1.8   |           | ppbv  | 1                    | 8/24/2012     |
| 4-Ethyltoluene                                    | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 4-Methyl-2-pentanone                              | ND     | 1.8   |           | ppbv  | 1                    | 8/24/2012     |
| Acetone   | 34     | 3.6   | *         | ppbv  | 1                    | 8/24/2012     |
| Benzene   | 0.99   | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Benzyl chloride                                   | ND     | 0.9   |           | ppbv  | 1                    | 8/24/2012     |
| Bromodichloromethane                              | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Bromoform   | ND     | 0.9   |           | ppbv  | 1                    | 8/24/2012     |
| Bromomethane                                      | ND     | 0.9   |           | ppbv  | 1                    | 8/24/2012     |
| Carbon disulfide                                  | 1.3    | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Carbon tetrachloride                              | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Chlorobenzene                                     | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Chloroethane                                      | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Chloroform  | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Chloromethane                                     | ND     | 0.9   |           | ppbv  | 1                    | 8/24/2012     |
| cis-1,2-Dichloroethene                            | 5.1    | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| cis-1,3-Dichloropropene                           | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Cyclohexane                                       | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Dibromochloromethane                              | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Dichlorodifluoromethane                           | 0.45   | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Ethyl acetate                                     | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-002

**Client Sample ID:** SV-02

**Collection Date** 8/21/2012 1:19:00 PM

**Matrix:** Air

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|----------|--------|----|-----------|-------|----|---------------|
|----------|--------|----|-----------|-------|----|---------------|

|   |      |              |      |                             |                    |
|---|------|--------------|------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |      | <b>TO-15</b> |      | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| Ethylbenzene                                      | 0.69 | 0.36         | ppbv | 1                           | 8/24/2012          |
| Freon-113   | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Freon-114   | ND   | 1.8          | ppbv | 1                           | 8/24/2012          |
| Heptane   | 1.1  | 0.36         | ppbv | 1                           | 8/24/2012          |
| Hexachlorobutadiene                               | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Hexane  | 1.8  | 0.9          | ppbv | 1                           | 8/24/2012          |
| Isopropyl Alcohol                                 | ND   | 1.8          | ppbv | 1                           | 8/24/2012          |
| m,p-Xylene  | 2.4  | 0.72         | ppbv | 1                           | 8/24/2012          |
| Methyl tert-butyl ether                           | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Methylene chloride                                | ND   | 3.6          | ppbv | 1                           | 8/24/2012          |
| o-Xylene  | 0.72 | 0.36         | ppbv | 1                           | 8/24/2012          |
| Propene   | 10   | 3.6          | ppbv | 1                           | 8/24/2012          |
| Styrene   | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Tetrachloroethene                                 | 0.65 | 0.36         | ppbv | 1                           | 8/24/2012          |
| Tetrahydrofuran                                   | ND   | 0.9          | ppbv | 1                           | 8/24/2012          |
| Toluene   | 4.4  | 0.36         | ppbv | 1                           | 8/24/2012          |
| trans-1,2-Dichloroethene                          | 0.94 | 0.36         | ppbv | 1                           | 8/24/2012          |
| trans-1,3-Dichloropropene                         | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Trichloroethene                                   | 5.9  | 0.36         | ppbv | 1                           | 8/24/2012          |
| Trichlorofluoromethane                            | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Vinyl acetate                                     | ND   | 3.6          | ppbv | 1                           | 8/24/2012          |
| Vinyl chloride                                    | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Xylenes, Total                                    | 3.1  | 1.1          | ppbv | 1                           | 8/24/2012          |

|   |     |              |       |                             |                    |
|---|-----|--------------|-------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |     | <b>TO-15</b> |       | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| 1,1,1-Trichloroethane                             | ND  | 2            | µg/m³ | 1                           | 8/24/2012          |
| 1,1,2,2-Tetrachloroethane                         | ND  | 2.5          | µg/m³ | 1                           | 8/24/2012          |
| 1,1,2-Trichloroethane                             | ND  | 2            | µg/m³ | 1                           | 8/24/2012          |
| 1,1-Dichloroethane                                | ND  | 1.4          | µg/m³ | 1                           | 8/24/2012          |
| 1,1-Dichloroethene                                | ND  | 1.4          | µg/m³ | 1                           | 8/24/2012          |
| 1,2,4-Trichlorobenzene                            | ND  | 2.7          | µg/m³ | 1                           | 8/24/2012          |
| 1,2,4-Trimethylbenzene                            | 3.5 | 1.8          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dibromoethane                                 | ND  | 2.7          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichlorobenzene                               | ND  | 2.2          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichloroethane                                | ND  | 1.4          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichloropropane                               | ND  | 1.6          | µg/m³ | 1                           | 8/24/2012          |
| 1,3,5-Trimethylbenzene                            | ND  | 1.8          | µg/m³ | 1                           | 8/24/2012          |
| 1,3-Butadiene                                     | 2   | 0.72         | µg/m³ | 1                           | 8/24/2012          |
| 1,3-Dichlorobenzene                               | ND  | 2.2          | µg/m³ | 1                           | 8/24/2012          |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

# STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-002

**Client Sample ID:** SV-02

**Collection Date** 8/21/2012 1:19:00 PM

**Matrix:** Air

| Analyses  | Result | RL  | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|-----|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |     |           |       |                      |               |
|   | TO-15  |     |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,4-Dichlorobenzene                               | ND     | 2.2 |           | µg/m³ | 1                    | 8/24/2012     |
| 1,4-Dioxane                                       | ND     | 3.2 |           | µg/m³ | 1                    | 8/24/2012     |
| 2-Butanone  | 7      | 2.7 |           | µg/m³ | 1                    | 8/24/2012     |
| 2-Hexanone  | ND     | 7.4 |           | µg/m³ | 1                    | 8/24/2012     |
| 4-Ethyltoluene                                    | ND     | 1.8 |           | µg/m³ | 1                    | 8/24/2012     |
| 4-Methyl-2-pentanone                              | ND     | 7.4 |           | µg/m³ | 1                    | 8/24/2012     |
| Acetone   | 80     | 8.7 | *         | µg/m³ | 1                    | 8/24/2012     |
| Benzene   | 3.2    | 1.1 |           | µg/m³ | 1                    | 8/24/2012     |
| Benzyl chloride                                   | ND     | 4.7 |           | µg/m³ | 1                    | 8/24/2012     |
| Bromodichloromethane                              | ND     | 2.3 |           | µg/m³ | 1                    | 8/24/2012     |
| Bromoform   | ND     | 9.4 |           | µg/m³ | 1                    | 8/24/2012     |
| Bromomethane                                      | ND     | 3.4 |           | µg/m³ | 1                    | 8/24/2012     |
| Carbon disulfide                                  | 4.2    | 1.1 |           | µg/m³ | 1                    | 8/24/2012     |
| Carbon tetrachloride                              | ND     | 2.3 |           | µg/m³ | 1                    | 8/24/2012     |
| Chlorobenzene                                     | ND     | 1.6 |           | µg/m³ | 1                    | 8/24/2012     |
| Chloroethane                                      | ND     | 0.9 |           | µg/m³ | 1                    | 8/24/2012     |
| Chloroform  | ND     | 1.8 |           | µg/m³ | 1                    | 8/24/2012     |
| Chloromethane                                     | ND     | 1.8 |           | µg/m³ | 1                    | 8/24/2012     |
| cis-1,2-Dichloroethene                            | 20     | 1.4 |           | µg/m³ | 1                    | 8/24/2012     |
| cis-1,3-Dichloropropene                           | ND     | 1.6 |           | µg/m³ | 1                    | 8/24/2012     |
| Cyclohexane                                       | ND     | 1.3 |           | µg/m³ | 1                    | 8/24/2012     |
| Dibromochloromethane                              | ND     | 3.1 |           | µg/m³ | 1                    | 8/24/2012     |
| Dichlorodifluoromethane                           | 2.2    | 1.8 |           | µg/m³ | 1                    | 8/24/2012     |
| Ethyl acetate                                     | ND     | 1.3 |           | µg/m³ | 1                    | 8/24/2012     |
| Ethylbenzene                                      | 3      | 1.6 |           | µg/m³ | 1                    | 8/24/2012     |
| Freon-113   | ND     | 2.7 |           | µg/m³ | 1                    | 8/24/2012     |
| Freon-114   | ND     | 13  |           | µg/m³ | 1                    | 8/24/2012     |
| Heptane   | 4.4    | 1.4 |           | µg/m³ | 1                    | 8/24/2012     |
| Hexachlorobutadiene                               | ND     | 3.8 |           | µg/m³ | 1                    | 8/24/2012     |
| Hexane  | 6.2    | 3.2 |           | µg/m³ | 1                    | 8/24/2012     |
| Isopropyl Alcohol                                 | ND     | 4.5 |           | µg/m³ | 1                    | 8/24/2012     |
| m,p-Xylene  | 10     | 3.1 |           | µg/m³ | 1                    | 8/24/2012     |
| Methyl tert-butyl ether                           | ND     | 1.3 |           | µg/m³ | 1                    | 8/24/2012     |
| Methylene chloride                                | ND     | 12  |           | µg/m³ | 1                    | 8/24/2012     |
| o-Xylene  | 3.1    | 1.6 |           | µg/m³ | 1                    | 8/24/2012     |
| Propene   | 18     | 6.1 |           | µg/m³ | 1                    | 8/24/2012     |
| Styrene   | ND     | 1.6 |           | µg/m³ | 1                    | 8/24/2012     |
| Tetrachloroethene                                 | 4.4    | 2.5 |           | µg/m³ | 1                    | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-002

**Client Sample ID:** SV-02**Collection Date** 8/21/2012 1:19:00 PM**Matrix:** Air

| Analyses  | Result | RL  | Qualifier | Units | DF | Date Analyzed |
|---|--------|-----|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> <b>TO-15</b> Prep Date: <b>8/23/2012</b> Analyst: <b>VP</b> |        |     |           |       |    |               |
| Tetrahydrofuran   | ND     | 2.7 |           | µg/m³ | 1  | 8/24/2012     |
| Toluene   | 17     | 1.4 |           | µg/m³ | 1  | 8/24/2012     |
| trans-1,2-Dichloroethene  | 3.7    | 1.4 |           | µg/m³ | 1  | 8/24/2012     |
| trans-1,3-Dichloropropene   | ND     | 1.6 |           | µg/m³ | 1  | 8/24/2012     |
| Trichloroethene   | 32     | 2   |           | µg/m³ | 1  | 8/24/2012     |
| Trichlorofluoromethane  | ND     | 2   |           | µg/m³ | 1  | 8/24/2012     |
| Vinyl acetate   | ND     | 13  |           | µg/m³ | 1  | 8/24/2012     |
| Vinyl chloride  | ND     | 0.9 |           | µg/m³ | 1  | 8/24/2012     |
| Xylenes, Total  | 13     | 4.7 |           | µg/m³ | 1  | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-003

**Client Sample ID:** SV-03**Collection Date** 8/21/2012 2:20:00 PM**Matrix:** Air

| Analyses  | Result | RL    | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|-------|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |       |           |       |                      |               |
|   |        | TO-15 |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,1,1-Trichloroethane                             | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1,2,2-Tetrachloroethane                         | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1,2-Trichloroethane                             | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1-Dichloroethane                                | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1-Dichloroethene                                | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2,4-Trichlorobenzene                            | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2,4-Trimethylbenzene                            | 0.67   | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dibromoethane                                 | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichlorobenzene                               | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichloroethane                                | 1.2    | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichloropropane                               | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3,5-Trimethylbenzene                            | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3-Butadiene                                     | 0.8    | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3-Dichlorobenzene                               | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,4-Dichlorobenzene                               | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 1,4-Dioxane                                       | ND     | 0.89  |           | ppbv  | 1                    | 8/24/2012     |
| 2-Butanone  | 4.3    | 0.89  |           | ppbv  | 1                    | 8/24/2012     |
| 2-Hexanone  | ND     | 1.8   |           | ppbv  | 1                    | 8/24/2012     |
| 4-Ethyltoluene                                    | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| 4-Methyl-2-pentanone                              | ND     | 1.8   |           | ppbv  | 1                    | 8/24/2012     |
| Acetone   | 47     | 3.6   | *         | ppbv  | 1                    | 8/24/2012     |
| Benzene   | 0.75   | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Benzyl chloride                                   | ND     | 0.89  |           | ppbv  | 1                    | 8/24/2012     |
| Bromodichloromethane                              | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Bromoform   | ND     | 0.89  |           | ppbv  | 1                    | 8/24/2012     |
| Bromomethane                                      | ND     | 0.89  |           | ppbv  | 1                    | 8/24/2012     |
| Carbon disulfide                                  | 1.2    | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Carbon tetrachloride                              | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Chlorobenzene                                     | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Chloroethane                                      | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Chloroform  | 0.44   | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Chloromethane                                     | ND     | 0.89  |           | ppbv  | 1                    | 8/24/2012     |
| cis-1,2-Dichloroethene                            | 2.6    | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| cis-1,3-Dichloropropene                           | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Cyclohexane                                       | 0.41   | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Dibromochloromethane                              | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Dichlorodifluoromethane                           | 0.44   | 0.36  |           | ppbv  | 1                    | 8/24/2012     |
| Ethyl acetate                                     | ND     | 0.36  |           | ppbv  | 1                    | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

# STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-003

**Client Sample ID:** SV-03

**Collection Date** 8/21/2012 2:20:00 PM

**Matrix:** Air

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|----------|--------|----|-----------|-------|----|---------------|
|----------|--------|----|-----------|-------|----|---------------|

|   |      |              |      |                             |                    |
|---|------|--------------|------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |      | <b>TO-15</b> |      | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| Ethylbenzene                                      | 0.48 | 0.36         | ppbv | 1                           | 8/24/2012          |
| Freon-113   | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Freon-114   | ND   | 1.8          | ppbv | 1                           | 8/24/2012          |
| Heptane   | 1.5  | 0.36         | ppbv | 1                           | 8/24/2012          |
| Hexachlorobutadiene                               | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Hexane  | 3.1  | 0.89         | ppbv | 1                           | 8/24/2012          |
| Isopropyl Alcohol                                 | 19   | 1.8          | ppbv | 1                           | 8/24/2012          |
| m,p-Xylene  | 1.6  | 0.71         | ppbv | 1                           | 8/24/2012          |
| Methyl tert-butyl ether                           | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Methylene chloride                                | ND   | 3.6          | ppbv | 1                           | 8/24/2012          |
| o-Xylene  | 0.62 | 0.36         | ppbv | 1                           | 8/24/2012          |
| Propene   | 21   | 3.6          | ppbv | 1                           | 8/24/2012          |
| Styrene   | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Tetrachloroethene                                 | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Tetrahydrofuran                                   | ND   | 0.89         | ppbv | 1                           | 8/24/2012          |
| Toluene   | 3.2  | 0.36         | ppbv | 1                           | 8/24/2012          |
| trans-1,2-Dichloroethene                          | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| trans-1,3-Dichloropropene                         | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Trichloroethene                                   | 5.5  | 0.36         | ppbv | 1                           | 8/24/2012          |
| Trichlorofluoromethane                            | ND   | 0.36         | ppbv | 1                           | 8/24/2012          |
| Vinyl acetate                                     | ND   | 3.6          | ppbv | 1                           | 8/24/2012          |
| Vinyl chloride                                    | 0.82 | 0.36         | ppbv | 1                           | 8/24/2012          |
| Xylenes, Total                                    | 2.2  | 1.1          | ppbv | 1                           | 8/24/2012          |

|   |     |              |       |                             |                    |
|---|-----|--------------|-------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |     | <b>TO-15</b> |       | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| 1,1,1-Trichloroethane                             | ND  | 2            | µg/m³ | 1                           | 8/24/2012          |
| 1,1,2,2-Tetrachloroethane                         | ND  | 2.5          | µg/m³ | 1                           | 8/24/2012          |
| 1,1,2-Trichloroethane                             | ND  | 2            | µg/m³ | 1                           | 8/24/2012          |
| 1,1-Dichloroethane                                | ND  | 1.4          | µg/m³ | 1                           | 8/24/2012          |
| 1,1-Dichloroethene                                | ND  | 1.4          | µg/m³ | 1                           | 8/24/2012          |
| 1,2,4-Trichlorobenzene                            | ND  | 2.7          | µg/m³ | 1                           | 8/24/2012          |
| 1,2,4-Trimethylbenzene                            | 3.3 | 1.8          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dibromoethane                                 | ND  | 2.7          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichlorobenzene                               | ND  | 2.1          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichloroethane                                | 4.8 | 1.4          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichloropropane                               | ND  | 1.6          | µg/m³ | 1                           | 8/24/2012          |
| 1,3,5-Trimethylbenzene                            | ND  | 1.8          | µg/m³ | 1                           | 8/24/2012          |
| 1,3-Butadiene                                     | 1.8 | 0.71         | µg/m³ | 1                           | 8/24/2012          |
| 1,3-Dichlorobenzene                               | ND  | 2.2          | µg/m³ | 1                           | 8/24/2012          |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

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HT - Sample received past holding time

E - Value above quantitation range

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H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-003

**Client Sample ID:** SV-03

**Collection Date** 8/21/2012 2:20:00 PM

**Matrix:** Air

| Analyses  | Result | RL   | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|------|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |      |           |       |                      |               |
|   | TO-15  |      |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,4-Dichlorobenzene                               | ND     | 2.1  |           | µg/m³ | 1                    | 8/24/2012     |
| 1,4-Dioxane                                       | ND     | 3.2  |           | µg/m³ | 1                    | 8/24/2012     |
| 2-Butanone  | 13     | 2.7  |           | µg/m³ | 1                    | 8/24/2012     |
| 2-Hexanone  | ND     | 7.3  |           | µg/m³ | 1                    | 8/24/2012     |
| 4-Ethyltoluene                                    | ND     | 1.8  |           | µg/m³ | 1                    | 8/24/2012     |
| 4-Methyl-2-pentanone                              | ND     | 7.3  |           | µg/m³ | 1                    | 8/24/2012     |
| Acetone   | 110    | 8.5  | *         | µg/m³ | 1                    | 8/24/2012     |
| Benzene   | 2.4    | 1.1  |           | µg/m³ | 1                    | 8/24/2012     |
| Benzyl chloride                                   | ND     | 4.6  |           | µg/m³ | 1                    | 8/24/2012     |
| Bromodichloromethane                              | ND     | 2.3  |           | µg/m³ | 1                    | 8/24/2012     |
| Bromoform   | ND     | 9.2  |           | µg/m³ | 1                    | 8/24/2012     |
| Bromomethane                                      | ND     | 3.4  |           | µg/m³ | 1                    | 8/24/2012     |
| Carbon disulfide                                  | 3.6    | 1.1  |           | µg/m³ | 1                    | 8/24/2012     |
| Carbon tetrachloride                              | ND     | 2.3  |           | µg/m³ | 1                    | 8/24/2012     |
| Chlorobenzene                                     | ND     | 1.6  |           | µg/m³ | 1                    | 8/24/2012     |
| Chloroethane                                      | ND     | 0.89 |           | µg/m³ | 1                    | 8/24/2012     |
| Chloroform  | 2.2    | 1.8  |           | µg/m³ | 1                    | 8/24/2012     |
| Chloromethane                                     | ND     | 1.8  |           | µg/m³ | 1                    | 8/24/2012     |
| cis-1,2-Dichloroethene                            | 10     | 1.4  |           | µg/m³ | 1                    | 8/24/2012     |
| cis-1,3-Dichloropropene                           | ND     | 1.6  |           | µg/m³ | 1                    | 8/24/2012     |
| Cyclohexane                                       | 1.4    | 1.2  |           | µg/m³ | 1                    | 8/24/2012     |
| Dibromochloromethane                              | ND     | 3    |           | µg/m³ | 1                    | 8/24/2012     |
| Dichlorodifluoromethane                           | 2.2    | 1.8  |           | µg/m³ | 1                    | 8/24/2012     |
| Ethyl acetate                                     | ND     | 1.2  |           | µg/m³ | 1                    | 8/24/2012     |
| Ethylbenzene                                      | 2.1    | 1.6  |           | µg/m³ | 1                    | 8/24/2012     |
| Freon-113   | ND     | 2.7  |           | µg/m³ | 1                    | 8/24/2012     |
| Freon-114   | ND     | 12   |           | µg/m³ | 1                    | 8/24/2012     |
| Heptane   | 6.3    | 1.4  |           | µg/m³ | 1                    | 8/24/2012     |
| Hexachlorobutadiene                               | ND     | 3.7  |           | µg/m³ | 1                    | 8/24/2012     |
| Hexane  | 11     | 3.2  |           | µg/m³ | 1                    | 8/24/2012     |
| Isopropyl Alcohol                                 | 47     | 4.4  |           | µg/m³ | 1                    | 8/24/2012     |
| m,p-Xylene  | 6.9    | 3    |           | µg/m³ | 1                    | 8/24/2012     |
| Methyl tert-butyl ether                           | ND     | 1.2  |           | µg/m³ | 1                    | 8/24/2012     |
| Methylene chloride                                | ND     | 12   |           | µg/m³ | 1                    | 8/24/2012     |
| o-Xylene  | 2.7    | 1.6  |           | µg/m³ | 1                    | 8/24/2012     |
| Propene   | 36     | 6    |           | µg/m³ | 1                    | 8/24/2012     |
| Styrene   | ND     | 1.6  |           | µg/m³ | 1                    | 8/24/2012     |
| Tetrachloroethene                                 | ND     | 2.5  |           | µg/m³ | 1                    | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

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HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-003

**Client Sample ID:** SV-03**Collection Date** 8/21/2012 2:20:00 PM**Matrix:** Air

| Analyses  | Result | RL   | Qualifier | Units | DF | Date Analyzed |
|---|--------|------|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> <b>TO-15</b> Prep Date: <b>8/23/2012</b> Analyst: <b>VP</b> |        |      |           |       |    |               |
| Tetrahydrofuran   | ND     | 2.7  |           | µg/m³ | 1  | 8/24/2012     |
| Toluene   | 12     | 1.4  |           | µg/m³ | 1  | 8/24/2012     |
| trans-1,2-Dichloroethene  | ND     | 1.4  |           | µg/m³ | 1  | 8/24/2012     |
| trans-1,3-Dichloropropene   | ND     | 1.6  |           | µg/m³ | 1  | 8/24/2012     |
| Trichloroethene   | 30     | 2    |           | µg/m³ | 1  | 8/24/2012     |
| Trichlorofluoromethane  | ND     | 2    |           | µg/m³ | 1  | 8/24/2012     |
| Vinyl acetate   | ND     | 12   |           | µg/m³ | 1  | 8/24/2012     |
| Vinyl chloride  | 2.1    | 0.89 |           | µg/m³ | 1  | 8/24/2012     |
| Xylenes, Total  | 9.6    | 4.6  |           | µg/m³ | 1  | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-004

**Client Sample ID:** SV-04

**Collection Date** 8/21/2012 2:46:00 PM

**Matrix:** Air

| Analyses  |       | Result | RL | Qualifier | Units                | DF | Date Analyzed |
|---|-------|--------|----|-----------|----------------------|----|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |       |        |    |           |                      |    |               |
|   | TO-15 |        |    |           | Prep Date: 8/23/2012 |    | Analyst: VP   |
| 1,1,1-Trichloroethane                             | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,1,2,2-Tetrachloroethane                         | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,1,2-Trichloroethane                             | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,1-Dichloroethane                                | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,1-Dichloroethene                                | 14    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,2,4-Trichlorobenzene                            | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,2,4-Trimethylbenzene                            | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,2-Dibromoethane                                 | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,2-Dichlorobenzene                               | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,2-Dichloroethane                                | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,2-Dichloropropane                               | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,3,5-Trimethylbenzene                            | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,3-Butadiene                                     | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,3-Dichlorobenzene                               | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,4-Dichlorobenzene                               | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 1,4-Dioxane                                       | ND    | 1      |    | ppbv      | 1                    |    | 8/24/2012     |
| 2-Butanone  | ND    | 1      |    | ppbv      | 1                    |    | 8/24/2012     |
| 2-Hexanone  | ND    | 2.1    |    | ppbv      | 1                    |    | 8/24/2012     |
| 4-Ethyltoluene                                    | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| 4-Methyl-2-pentanone                              | ND    | 2.1    |    | ppbv      | 1                    |    | 8/24/2012     |
| Acetone   | 10    | 4.2    | *  | ppbv      | 1                    |    | 8/24/2012     |
| Benzene   | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| Benzyl chloride                                   | ND    | 1      |    | ppbv      | 1                    |    | 8/24/2012     |
| Bromodichloromethane                              | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| Bromoform   | ND    | 1      |    | ppbv      | 1                    |    | 8/24/2012     |
| Bromomethane                                      | ND    | 1      |    | ppbv      | 1                    |    | 8/24/2012     |
| Carbon disulfide                                  | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| Carbon tetrachloride                              | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| Chlorobenzene                                     | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| Chloroethane                                      | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| Chloroform  | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| Chloromethane                                     | ND    | 1      |    | ppbv      | 1                    |    | 8/24/2012     |
| cis-1,2-Dichloroethene                            | 6300  | 83     |    | ppbv      | 200                  |    | 8/28/2012     |
| cis-1,3-Dichloropropene                           | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| Cyclohexane                                       | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| Dibromochloromethane                              | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| Dichlorodifluoromethane                           | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |
| Ethyl acetate                                     | ND    | 0.42   |    | ppbv      | 1                    |    | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

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B - Analyte detected in the associated Method Blank

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Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-004

**Client Sample ID:** SV-04

**Collection Date** 8/21/2012 2:46:00 PM

**Matrix:** Air

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|----------|--------|----|-----------|-------|----|---------------|
|----------|--------|----|-----------|-------|----|---------------|

|   |     |              |      |                             |                    |
|---|-----|--------------|------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |     | <b>TO-15</b> |      | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| Ethylbenzene                                      | ND  | 0.42         | ppbv | 1                           | 8/24/2012          |
| Freon-113   | ND  | 0.42         | ppbv | 1                           | 8/24/2012          |
| Freon-114   | ND  | 2.1          | ppbv | 1                           | 8/24/2012          |
| Heptane   | ND  | 0.42         | ppbv | 1                           | 8/24/2012          |
| Hexachlorobutadiene                               | ND  | 0.42         | ppbv | 1                           | 8/24/2012          |
| Hexane  | 1.5 | 1            | ppbv | 1                           | 8/24/2012          |
| Isopropyl Alcohol                                 | 2.4 | 2.1          | ppbv | 1                           | 8/24/2012          |
| m,p-Xylene  | ND  | 0.83         | ppbv | 1                           | 8/24/2012          |
| Methyl tert-butyl ether                           | ND  | 0.42         | ppbv | 1                           | 8/24/2012          |
| Methylene chloride                                | ND  | 4.2          | ppbv | 1                           | 8/24/2012          |
| o-Xylene  | ND  | 0.42         | ppbv | 1                           | 8/24/2012          |
| Propene   | 4.9 | 4.2          | ppbv | 1                           | 8/24/2012          |
| Styrene   | ND  | 0.42         | ppbv | 1                           | 8/24/2012          |
| Tetrachloroethene                                 | ND  | 0.42         | ppbv | 1                           | 8/24/2012          |
| Tetrahydrofuran                                   | ND  | 1            | ppbv | 1                           | 8/24/2012          |
| Toluene   | 1.1 | 0.42         | ppbv | 1                           | 8/24/2012          |
| trans-1,2-Dichloroethene                          | 63  | 0.42         | ppbv | 1                           | 8/24/2012          |
| trans-1,3-Dichloropropene                         | ND  | 0.42         | ppbv | 1                           | 8/24/2012          |
| Trichloroethene                                   | 910 | 10           | ppbv | 25                          | 8/25/2012          |
| Trichlorofluoromethane                            | ND  | 0.42         | ppbv | 1                           | 8/24/2012          |
| Vinyl acetate                                     | ND  | 4.2          | ppbv | 1                           | 8/24/2012          |
| Vinyl chloride                                    | 640 | 10           | ppbv | 25                          | 8/25/2012          |
| Xylenes, Total                                    | ND  | 1.2          | ppbv | 1                           | 8/24/2012          |

|   |    |              |       |                             |                    |
|---|----|--------------|-------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |    | <b>TO-15</b> |       | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| 1,1,1-Trichloroethane                             | ND | 2.3          | µg/m³ | 1                           | 8/24/2012          |
| 1,1,2,2-Tetrachloroethane                         | ND | 2.9          | µg/m³ | 1                           | 8/24/2012          |
| 1,1,2-Trichloroethane                             | ND | 2.3          | µg/m³ | 1                           | 8/24/2012          |
| 1,1-Dichloroethane                                | ND | 1.7          | µg/m³ | 1                           | 8/24/2012          |
| 1,1-Dichloroethene                                | 57 | 1.7          | µg/m³ | 1                           | 8/24/2012          |
| 1,2,4-Trichlorobenzene                            | ND | 3.1          | µg/m³ | 1                           | 8/24/2012          |
| 1,2,4-Trimethylbenzene                            | ND | 2.1          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dibromoethane                                 | ND | 3.1          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichlorobenzene                               | ND | 2.5          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichloroethane                                | ND | 1.7          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichloropropane                               | ND | 1.9          | µg/m³ | 1                           | 8/24/2012          |
| 1,3,5-Trimethylbenzene                            | ND | 2.1          | µg/m³ | 1                           | 8/24/2012          |
| 1,3-Butadiene                                     | ND | 0.83         | µg/m³ | 1                           | 8/24/2012          |
| 1,3-Dichlorobenzene                               | ND | 2.5          | µg/m³ | 1                           | 8/24/2012          |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

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HT - Sample received past holding time

E - Value above quantitation range

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# STAT Analysis Corporation

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-004

**Client Sample ID:** SV-04

**Collection Date** 8/21/2012 2:46:00 PM

**Matrix:** Air

| Analyses  | Result | RL    | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|-------|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |       |           |       |                      |               |
|   |        | TO-15 |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,4-Dichlorobenzene                               | ND     | 2.5   |           | µg/m³ | 1                    | 8/24/2012     |
| 1,4-Dioxane                                       | ND     | 3.7   |           | µg/m³ | 1                    | 8/24/2012     |
| 2-Butanone  | ND     | 3.1   |           | µg/m³ | 1                    | 8/24/2012     |
| 2-Hexanone  | ND     | 8.5   |           | µg/m³ | 1                    | 8/24/2012     |
| 4-Ethyltoluene                                    | ND     | 2.1   |           | µg/m³ | 1                    | 8/24/2012     |
| 4-Methyl-2-pentanone                              | ND     | 8.5   |           | µg/m³ | 1                    | 8/24/2012     |
| Acetone   | 25     | 10    | *         | µg/m³ | 1                    | 8/24/2012     |
| Benzene   | ND     | 1.2   |           | µg/m³ | 1                    | 8/24/2012     |
| Benzyl chloride                                   | ND     | 5.4   |           | µg/m³ | 1                    | 8/24/2012     |
| Bromodichloromethane                              | ND     | 2.7   |           | µg/m³ | 1                    | 8/24/2012     |
| Bromoform   | ND     | 11    |           | µg/m³ | 1                    | 8/24/2012     |
| Bromomethane                                      | ND     | 3.9   |           | µg/m³ | 1                    | 8/24/2012     |
| Carbon disulfide                                  | ND     | 1.3   |           | µg/m³ | 1                    | 8/24/2012     |
| Carbon tetrachloride                              | ND     | 2.7   |           | µg/m³ | 1                    | 8/24/2012     |
| Chlorobenzene                                     | ND     | 1.9   |           | µg/m³ | 1                    | 8/24/2012     |
| Chloroethane                                      | ND     | 1     |           | µg/m³ | 1                    | 8/24/2012     |
| Chloroform  | ND     | 2.1   |           | µg/m³ | 1                    | 8/24/2012     |
| Chloromethane                                     | ND     | 2.1   |           | µg/m³ | 1                    | 8/24/2012     |
| cis-1,2-Dichloroethene                            | 25000  | 330   |           | µg/m³ | 200                  | 8/28/2012     |
| cis-1,3-Dichloropropene                           | ND     | 1.9   |           | µg/m³ | 1                    | 8/24/2012     |
| Cyclohexane                                       | ND     | 1.5   |           | µg/m³ | 1                    | 8/24/2012     |
| Dibromochloromethane                              | ND     | 3.5   |           | µg/m³ | 1                    | 8/24/2012     |
| Dichlorodifluoromethane                           | ND     | 2.1   |           | µg/m³ | 1                    | 8/24/2012     |
| Ethyl acetate                                     | ND     | 1.5   |           | µg/m³ | 1                    | 8/24/2012     |
| Ethylbenzene                                      | ND     | 1.9   |           | µg/m³ | 1                    | 8/24/2012     |
| Freon-113   | ND     | 3.1   |           | µg/m³ | 1                    | 8/24/2012     |
| Freon-114   | ND     | 15    |           | µg/m³ | 1                    | 8/24/2012     |
| Heptane   | ND     | 1.7   |           | µg/m³ | 1                    | 8/24/2012     |
| Hexachlorobutadiene                               | ND     | 4.4   |           | µg/m³ | 1                    | 8/24/2012     |
| Hexane  | 5.3    | 3.7   |           | µg/m³ | 1                    | 8/24/2012     |
| Isopropyl Alcohol                                 | 6      | 5.2   |           | µg/m³ | 1                    | 8/24/2012     |
| m,p-Xylene  | ND     | 3.5   |           | µg/m³ | 1                    | 8/24/2012     |
| Methyl tert-butyl ether                           | ND     | 1.5   |           | µg/m³ | 1                    | 8/24/2012     |
| Methylene chloride                                | ND     | 14    |           | µg/m³ | 1                    | 8/24/2012     |
| o-Xylene  | ND     | 1.9   |           | µg/m³ | 1                    | 8/24/2012     |
| Propene   | 8.4    | 7.1   |           | µg/m³ | 1                    | 8/24/2012     |
| Styrene   | ND     | 1.9   |           | µg/m³ | 1                    | 8/24/2012     |
| Tetrachloroethene                                 | ND     | 2.9   |           | µg/m³ | 1                    | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-004

**Client Sample ID:** SV-04**Collection Date** 8/21/2012 2:46:00 PM**Matrix:** Air

| <b>Analyses</b>   | <b>Result</b> | <b>RL</b> | <b>Qualifier</b> | <b>Units</b> | <b>DF</b> | <b>Date Analyzed</b> |
|---|---------------|-----------|------------------|--------------|-----------|----------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> <b>TO-15</b> Prep Date: <b>8/23/2012</b> Analyst: <b>VP</b> |               |           |                  |              |           |                      |
| Tetrahydrofuran   | ND            | 3.1       |                  | µg/m³        | 1         | 8/24/2012            |
| Toluene   | 4.1           | 1.7       |                  | µg/m³        | 1         | 8/24/2012            |
| trans-1,2-Dichloroethene  | 250           | 1.7       |                  | µg/m³        | 1         | 8/24/2012            |
| trans-1,3-Dichloropropene   | ND            | 1.9       |                  | µg/m³        | 1         | 8/24/2012            |
| Trichloroethene   | 4900          | 57        |                  | µg/m³        | 25        | 8/25/2012            |
| Trichlorofluoromethane  | ND            | 2.3       |                  | µg/m³        | 1         | 8/24/2012            |
| Vinyl acetate   | ND            | 15        |                  | µg/m³        | 1         | 8/24/2012            |
| Vinyl chloride  | 1600          | 26        |                  | µg/m³        | 25        | 8/25/2012            |
| Xylenes, Total  | ND            | 5.4       |                  | µg/m³        | 1         | 8/24/2012            |

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RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-005

**Client Sample ID:** SV-04-DUP**Collection Date** 8/21/2012 2:46:00 PM**Matrix:** Air

| Analyses  |              | Result | RL | Qualifier | Units                       | DF | Date Analyzed      |
|---|--------------|--------|----|-----------|-----------------------------|----|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> | <b>TO-15</b> |        |    |           | Prep Date: <b>8/23/2012</b> |    | <b>Analyst: VP</b> |
| 1,1,1-Trichloroethane                             | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,1,2,2-Tetrachloroethane                         | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,1,2-Trichloroethane                             | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,1-Dichloroethane                                | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,1-Dichloroethene                                | 75           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,2,4-Trichlorobenzene                            | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,2,4-Trimethylbenzene                            | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,2-Dibromoethane                                 | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,2-Dichlorobenzene                               | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,2-Dichloroethane                                | 0.96         | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,2-Dichloropropane                               | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,3,5-Trimethylbenzene                            | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,3-Butadiene                                     | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,3-Dichlorobenzene                               | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,4-Dichlorobenzene                               | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 1,4-Dioxane                                       | ND           | 1      |    | ppbv      | 1                           |    | 8/24/2012          |
| 2-Butanone  | 1            | 1      |    | ppbv      | 1                           |    | 8/24/2012          |
| 2-Hexanone  | ND           | 2.1    |    | ppbv      | 1                           |    | 8/24/2012          |
| 4-Ethyltoluene                                    | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| 4-Methyl-2-pentanone                              | ND           | 2.1    |    | ppbv      | 1                           |    | 8/24/2012          |
| Acetone   | 20           | 4.2    | *  | ppbv      | 1                           |    | 8/24/2012          |
| Benzene   | 1.1          | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| Benzyl chloride                                   | ND           | 1      |    | ppbv      | 1                           |    | 8/24/2012          |
| Bromodichloromethane                              | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| Bromoform   | ND           | 1      |    | ppbv      | 1                           |    | 8/24/2012          |
| Bromomethane                                      | ND           | 1      |    | ppbv      | 1                           |    | 8/24/2012          |
| Carbon disulfide                                  | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| Carbon tetrachloride                              | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| Chlorobenzene                                     | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| Chloroethane                                      | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| Chloroform  | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| Chloromethane                                     | ND           | 1      |    | ppbv      | 1                           |    | 8/24/2012          |
| cis-1,2-Dichloroethene                            | 24000        | 210    |    | ppbv      | 500                         |    | 8/28/2012          |
| cis-1,3-Dichloropropene                           | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| Cyclohexane                                       | 0.94         | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| Dibromochloromethane                              | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| Dichlorodifluoromethane                           | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |
| Ethyl acetate                                     | ND           | 0.42   |    | ppbv      | 1                           |    | 8/24/2012          |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-005

**Client Sample ID:** SV-04-DUP

**Collection Date** 8/21/2012 2:46:00 PM

**Matrix:** Air

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|----------|--------|----|-----------|-------|----|---------------|
|----------|--------|----|-----------|-------|----|---------------|

|   |      |              |      |                             |                    |
|---|------|--------------|------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |      | <b>TO-15</b> |      | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| Ethylbenzene                                      | ND   | 0.42         | ppbv | 1                           | 8/24/2012          |
| Freon-113   | ND   | 0.42         | ppbv | 1                           | 8/24/2012          |
| Freon-114   | ND   | 2.1          | ppbv | 1                           | 8/24/2012          |
| Heptane   | 0.92 | 0.42         | ppbv | 1                           | 8/24/2012          |
| Hexachlorobutadiene                               | ND   | 0.42         | ppbv | 1                           | 8/24/2012          |
| Hexane  | 5.3  | 1            | ppbv | 1                           | 8/24/2012          |
| Isopropyl Alcohol                                 | 2.5  | 2.1          | ppbv | 1                           | 8/24/2012          |
| m,p-Xylene  | 0.83 | 0.83         | ppbv | 1                           | 8/24/2012          |
| Methyl tert-butyl ether                           | ND   | 0.42         | ppbv | 1                           | 8/24/2012          |
| Methylene chloride                                | ND   | 4.2          | ppbv | 1                           | 8/24/2012          |
| o-Xylene  | ND   | 0.42         | ppbv | 1                           | 8/24/2012          |
| Propene   | 18   | 4.2          | ppbv | 1                           | 8/24/2012          |
| Styrene   | ND   | 0.42         | ppbv | 1                           | 8/24/2012          |
| Tetrachloroethene                                 | 0.46 | 0.42         | ppbv | 1                           | 8/24/2012          |
| Tetrahydrofuran                                   | ND   | 1            | ppbv | 1                           | 8/24/2012          |
| Toluene   | 2.7  | 0.42         | ppbv | 1                           | 8/24/2012          |
| trans-1,2-Dichloroethene                          | 270  | 10           | ppbv | 25                          | 8/25/2012          |
| trans-1,3-Dichloropropene                         | ND   | 0.42         | ppbv | 1                           | 8/24/2012          |
| Trichloroethene                                   | 3200 | 210          | ppbv | 500                         | 8/28/2012          |
| Trichlorofluoromethane                            | ND   | 0.42         | ppbv | 1                           | 8/24/2012          |
| Vinyl acetate                                     | ND   | 4.2          | ppbv | 1                           | 8/24/2012          |
| Vinyl chloride                                    | 3100 | 210          | ppbv | 500                         | 8/28/2012          |
| Xylenes, Total                                    | 1.2  | 1.2          | ppbv | 1                           | 8/24/2012          |

|   |     |              |       |                             |                    |
|---|-----|--------------|-------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |     | <b>TO-15</b> |       | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| 1,1,1-Trichloroethane                             | ND  | 2.3          | µg/m³ | 1                           | 8/24/2012          |
| 1,1,2,2-Tetrachloroethane                         | ND  | 2.9          | µg/m³ | 1                           | 8/24/2012          |
| 1,1,2-Trichloroethane                             | ND  | 2.3          | µg/m³ | 1                           | 8/24/2012          |
| 1,1-Dichloroethane                                | ND  | 1.7          | µg/m³ | 1                           | 8/24/2012          |
| 1,1-Dichloroethene                                | 300 | 1.7          | µg/m³ | 1                           | 8/24/2012          |
| 1,2,4-Trichlorobenzene                            | ND  | 3.1          | µg/m³ | 1                           | 8/24/2012          |
| 1,2,4-Trimethylbenzene                            | ND  | 2.1          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dibromoethane                                 | ND  | 3.1          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichlorobenzene                               | ND  | 2.5          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichloroethane                                | 3.9 | 1.7          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichloropropane                               | ND  | 1.9          | µg/m³ | 1                           | 8/24/2012          |
| 1,3,5-Trimethylbenzene                            | ND  | 2.1          | µg/m³ | 1                           | 8/24/2012          |
| 1,3-Butadiene                                     | ND  | 0.83         | µg/m³ | 1                           | 8/24/2012          |
| 1,3-Dichlorobenzene                               | ND  | 2.5          | µg/m³ | 1                           | 8/24/2012          |

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RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

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Date Reported: December 31, 2012

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**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-005

**Client Sample ID:** SV-04-DUP

**Collection Date** 8/21/2012 2:46:00 PM

**Matrix:** Air

| Analyses  | Result | RL  | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|-----|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |     |           |       |                      |               |
|   | TO-15  |     |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,4-Dichlorobenzene                               | ND     | 2.5 |           | µg/m³ | 1                    | 8/24/2012     |
| 1,4-Dioxane                                       | ND     | 3.7 |           | µg/m³ | 1                    | 8/24/2012     |
| 2-Butanone  | 3      | 2.9 |           | µg/m³ | 1                    | 8/24/2012     |
| 2-Hexanone  | ND     | 8.5 |           | µg/m³ | 1                    | 8/24/2012     |
| 4-Ethyltoluene                                    | ND     | 2.1 |           | µg/m³ | 1                    | 8/24/2012     |
| 4-Methyl-2-pentanone                              | ND     | 8.5 |           | µg/m³ | 1                    | 8/24/2012     |
| Acetone   | 48     | 10  | *         | µg/m³ | 1                    | 8/24/2012     |
| Benzene   | 3.4    | 1.2 |           | µg/m³ | 1                    | 8/24/2012     |
| Benzyl chloride                                   | ND     | 5.4 |           | µg/m³ | 1                    | 8/24/2012     |
| Bromodichloromethane                              | ND     | 2.7 |           | µg/m³ | 1                    | 8/24/2012     |
| Bromoform   | ND     | 11  |           | µg/m³ | 1                    | 8/24/2012     |
| Bromomethane                                      | ND     | 4   |           | µg/m³ | 1                    | 8/24/2012     |
| Carbon disulfide                                  | ND     | 1.3 |           | µg/m³ | 1                    | 8/24/2012     |
| Carbon tetrachloride                              | ND     | 2.7 |           | µg/m³ | 1                    | 8/24/2012     |
| Chlorobenzene                                     | ND     | 1.9 |           | µg/m³ | 1                    | 8/24/2012     |
| Chloroethane                                      | ND     | 1   |           | µg/m³ | 1                    | 8/24/2012     |
| Chloroform  | ND     | 2.1 |           | µg/m³ | 1                    | 8/24/2012     |
| Chloromethane                                     | ND     | 2.1 |           | µg/m³ | 1                    | 8/24/2012     |
| cis-1,2-Dichloroethene                            | 96000  | 830 |           | µg/m³ | 500                  | 8/28/2012     |
| cis-1,3-Dichloropropene                           | ND     | 1.9 |           | µg/m³ | 1                    | 8/24/2012     |
| Cyclohexane                                       | 3.2    | 1.5 |           | µg/m³ | 1                    | 8/24/2012     |
| Dibromochloromethane                              | ND     | 3.5 |           | µg/m³ | 1                    | 8/24/2012     |
| Dichlorodifluoromethane                           | ND     | 2.1 |           | µg/m³ | 1                    | 8/24/2012     |
| Ethyl acetate                                     | ND     | 1.5 |           | µg/m³ | 1                    | 8/24/2012     |
| Ethylbenzene                                      | ND     | 1.9 |           | µg/m³ | 1                    | 8/24/2012     |
| Freon-113   | ND     | 3.1 |           | µg/m³ | 1                    | 8/24/2012     |
| Freon-114   | ND     | 15  |           | µg/m³ | 1                    | 8/24/2012     |
| Heptane   | 3.8    | 1.7 |           | µg/m³ | 1                    | 8/24/2012     |
| Hexachlorobutadiene                               | ND     | 4.4 |           | µg/m³ | 1                    | 8/24/2012     |
| Hexane  | 19     | 3.7 |           | µg/m³ | 1                    | 8/24/2012     |
| Isopropyl Alcohol                                 | 6.2    | 5.2 |           | µg/m³ | 1                    | 8/24/2012     |
| m,p-Xylene  | 3.6    | 3.5 |           | µg/m³ | 1                    | 8/24/2012     |
| Methyl tert-butyl ether                           | ND     | 1.5 |           | µg/m³ | 1                    | 8/24/2012     |
| Methylene chloride                                | ND     | 14  |           | µg/m³ | 1                    | 8/24/2012     |
| o-Xylene  | ND     | 1.9 |           | µg/m³ | 1                    | 8/24/2012     |
| Propene   | 32     | 7.1 |           | µg/m³ | 1                    | 8/24/2012     |
| Styrene   | ND     | 1.9 |           | µg/m³ | 1                    | 8/24/2012     |
| Tetrachloroethene                                 | 3.1    | 2.9 |           | µg/m³ | 1                    | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-005

**Client Sample ID:** SV-04-DUP**Collection Date** 8/21/2012 2:46:00 PM**Matrix:** Air

| Analyses   | Result | RL   | Qualifier | Units | DF  | Date Analyzed |
|--|--------|------|-----------|-------|-----|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS TO-15</b> Prep Date: <b>8/23/2012</b> Analyst: <b>VP</b> |        |      |           |       |     |               |
| Tetrahydrofuran  | ND     | 3.1  |           | µg/m³ | 1   | 8/24/2012     |
| Toluene  | 10     | 1.7  |           | µg/m³ | 1   | 8/24/2012     |
| trans-1,2-Dichloroethene   | 1100   | 42   |           | µg/m³ | 25  | 8/25/2012     |
| trans-1,3-Dichloropropene  | ND     | 1.9  |           | µg/m³ | 1   | 8/24/2012     |
| Trichloroethene  | 17000  | 1100 |           | µg/m³ | 500 | 8/28/2012     |
| Trichlorofluoromethane   | ND     | 2.3  |           | µg/m³ | 1   | 8/24/2012     |
| Vinyl acetate  | ND     | 15   |           | µg/m³ | 1   | 8/24/2012     |
| Vinyl chloride   | 7900   | 520  |           | µg/m³ | 500 | 8/28/2012     |
| Xylenes, Total   | 5.3    | 5    |           | µg/m³ | 1   | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

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HT - Sample received past holding time

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**STAT** Analysis Corporation

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-006

**Client Sample ID:** SV-05**Collection Date** 8/21/2012 3:25:00 PM**Matrix:** Air

| Analyses  | Result | RL    | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|-------|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |       |           |       |                      |               |
|   |        | TO-15 |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,1,1-Trichloroethane                             | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1,2,2-Tetrachloroethane                         | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1,2-Trichloroethane                             | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1-Dichloroethane                                | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,1-Dichloroethene                                | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2,4-Trichlorobenzene                            | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2,4-Trimethylbenzene                            | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dibromoethane                                 | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichlorobenzene                               | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichloroethane                                | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,2-Dichloropropane                               | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3,5-Trimethylbenzene                            | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3-Butadiene                                     | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,3-Dichlorobenzene                               | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,4-Dichlorobenzene                               | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 1,4-Dioxane                                       | ND     | 0.82  |           | ppbv  | 1                    | 8/24/2012     |
| 2-Butanone  | 1.1    | 0.82  |           | ppbv  | 1                    | 8/24/2012     |
| 2-Hexanone  | ND     | 1.6   |           | ppbv  | 1                    | 8/24/2012     |
| 4-Ethyltoluene                                    | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| 4-Methyl-2-pentanone                              | ND     | 1.6   |           | ppbv  | 1                    | 8/24/2012     |
| Acetone   | 17     | 3.3   | *         | ppbv  | 1                    | 8/24/2012     |
| Benzene   | 0.41   | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| Benzyl chloride                                   | ND     | 0.82  |           | ppbv  | 1                    | 8/24/2012     |
| Bromodichloromethane                              | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| Bromoform   | ND     | 0.82  |           | ppbv  | 1                    | 8/24/2012     |
| Bromomethane                                      | ND     | 0.82  |           | ppbv  | 1                    | 8/24/2012     |
| Carbon disulfide                                  | 0.35   | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| Carbon tetrachloride                              | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| Chlorobenzene                                     | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| Chloroethane                                      | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| Chloroform  | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| Chloromethane                                     | ND     | 0.82  |           | ppbv  | 1                    | 8/24/2012     |
| cis-1,2-Dichloroethene                            | 150    | 8.2   |           | ppbv  | 25                   | 8/25/2012     |
| cis-1,3-Dichloropropene                           | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| Cyclohexane                                       | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| Dibromochloromethane                              | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| Dichlorodifluoromethane                           | 0.43   | 0.33  |           | ppbv  | 1                    | 8/24/2012     |
| Ethyl acetate                                     | ND     | 0.33  |           | ppbv  | 1                    | 8/24/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-006

**Client Sample ID:** SV-05

**Collection Date** 8/21/2012 3:25:00 PM

**Matrix:** Air

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|----------|--------|----|-----------|-------|----|---------------|
|----------|--------|----|-----------|-------|----|---------------|

|   |      |              |      |                             |                    |
|---|------|--------------|------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |      | <b>TO-15</b> |      | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| Ethylbenzene                                      | ND   | 0.33         | ppbv | 1                           | 8/24/2012          |
| Freon-113   | ND   | 0.33         | ppbv | 1                           | 8/24/2012          |
| Freon-114   | ND   | 1.6          | ppbv | 1                           | 8/24/2012          |
| Heptane   | 0.56 | 0.33         | ppbv | 1                           | 8/24/2012          |
| Hexachlorobutadiene                               | ND   | 0.33         | ppbv | 1                           | 8/24/2012          |
| Hexane  | 1.2  | 0.82         | ppbv | 1                           | 8/24/2012          |
| Isopropyl Alcohol                                 | ND   | 1.6          | ppbv | 1                           | 8/24/2012          |
| m,p-Xylene  | ND   | 0.66         | ppbv | 1                           | 8/24/2012          |
| Methyl tert-butyl ether                           | ND   | 0.33         | ppbv | 1                           | 8/24/2012          |
| Methylene chloride                                | ND   | 3.3          | ppbv | 1                           | 8/24/2012          |
| o-Xylene  | ND   | 0.33         | ppbv | 1                           | 8/24/2012          |
| Propene   | ND   | 3.3          | ppbv | 1                           | 8/24/2012          |
| Styrene   | ND   | 0.33         | ppbv | 1                           | 8/24/2012          |
| Tetrachloroethene                                 | ND   | 0.33         | ppbv | 1                           | 8/24/2012          |
| Tetrahydrofuran                                   | ND   | 0.82         | ppbv | 1                           | 8/24/2012          |
| Toluene   | 1.4  | 0.33         | ppbv | 1                           | 8/24/2012          |
| trans-1,2-Dichloroethene                          | 2.3  | 0.33         | ppbv | 1                           | 8/28/2012          |
| trans-1,3-Dichloropropene                         | ND   | 0.33         | ppbv | 1                           | 8/24/2012          |
| Trichloroethene                                   | 5.3  | 0.33         | ppbv | 1                           | 8/28/2012          |
| Trichlorofluoromethane                            | ND   | 0.33         | ppbv | 1                           | 8/24/2012          |
| Vinyl acetate                                     | ND   | 3.3          | ppbv | 1                           | 8/24/2012          |
| Vinyl chloride                                    | 9.4  | 0.33         | ppbv | 1                           | 8/28/2012          |
| Xylenes, Total                                    | ND   | 0.99         | ppbv | 1                           | 8/24/2012          |

|   |    |              |       |                             |                    |
|---|----|--------------|-------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |    | <b>TO-15</b> |       | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| 1,1,1-Trichloroethane                             | ND | 1.8          | µg/m³ | 1                           | 8/24/2012          |
| 1,1,2,2-Tetrachloroethane                         | ND | 2.3          | µg/m³ | 1                           | 8/24/2012          |
| 1,1,2-Trichloroethane                             | ND | 1.8          | µg/m³ | 1                           | 8/24/2012          |
| 1,1-Dichloroethane                                | ND | 1.3          | µg/m³ | 1                           | 8/24/2012          |
| 1,1-Dichloroethene                                | ND | 1.5          | µg/m³ | 1                           | 8/24/2012          |
| 1,2,4-Trichlorobenzene                            | ND | 2.5          | µg/m³ | 1                           | 8/24/2012          |
| 1,2,4-Trimethylbenzene                            | ND | 1.6          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dibromoethane                                 | ND | 2.5          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichlorobenzene                               | ND | 2            | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichloroethane                                | ND | 1.3          | µg/m³ | 1                           | 8/24/2012          |
| 1,2-Dichloropropane                               | ND | 1.5          | µg/m³ | 1                           | 8/24/2012          |
| 1,3,5-Trimethylbenzene                            | ND | 1.6          | µg/m³ | 1                           | 8/24/2012          |
| 1,3-Butadiene                                     | ND | 0.66         | µg/m³ | 1                           | 8/24/2012          |
| 1,3-Dichlorobenzene                               | ND | 2            | µg/m³ | 1                           | 8/24/2012          |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-006

**Client Sample ID:** SV-05

**Collection Date** 8/21/2012 3:25:00 PM

**Matrix:** Air

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|----------|--------|----|-----------|-------|----|---------------|
|----------|--------|----|-----------|-------|----|---------------|

| Volatile Organic Compounds in Air by GC/MS | TO-15 |      |   | Prep Date: 8/23/2012 | Analyst: VP |
|--|-------|------|---|----------------------|-------------|
| 1,4-Dichlorobenzene                        | ND    | 2    |   | µg/m³                | 1           |
| 1,4-Dioxane                                | ND    | 3    |   | µg/m³                | 1           |
| 2-Butanone                                 | 3.2   | 2.5  |   | µg/m³                | 1           |
| 2-Hexanone                                 | ND    | 6.7  |   | µg/m³                | 1           |
| 4-Ethyltoluene                             | ND    | 1.6  |   | µg/m³                | 1           |
| 4-Methyl-2-pentanone                       | ND    | 6.7  |   | µg/m³                | 1           |
| Acetone                                    | 40    | 7.9  | * | µg/m³                | 1           |
| Benzene                                    | 1.3   | 0.99 |   | µg/m³                | 1           |
| Benzyl chloride                            | ND    | 4.3  |   | µg/m³                | 1           |
| Bromodichloromethane                       | ND    | 2.1  |   | µg/m³                | 1           |
| Bromoform                                  | ND    | 8.5  |   | µg/m³                | 1           |
| Bromomethane                               | ND    | 3.1  |   | µg/m³                | 1           |
| Carbon disulfide                           | 1.1   | 1    |   | µg/m³                | 1           |
| Carbon tetrachloride                       | ND    | 2.1  |   | µg/m³                | 1           |
| Chlorobenzene                              | ND    | 1.5  |   | µg/m³                | 1           |
| Chloroethane                               | ND    | 0.82 |   | µg/m³                | 1           |
| Chloroform                                 | ND    | 1.6  |   | µg/m³                | 1           |
| Chloromethane                              | ND    | 1.6  |   | µg/m³                | 1           |
| cis-1,2-Dichloroethene                     | 590   | 33   |   | µg/m³                | 25          |
| cis-1,3-Dichloropropene                    | ND    | 1.5  |   | µg/m³                | 1           |
| Cyclohexane                                | ND    | 1.2  |   | µg/m³                | 1           |
| Dibromochloromethane                       | ND    | 2.8  |   | µg/m³                | 1           |
| Dichlorodifluoromethane                    | 2.1   | 1.6  |   | µg/m³                | 1           |
| Ethyl acetate                              | ND    | 1.2  |   | µg/m³                | 1           |
| Ethylbenzene                               | ND    | 1.5  |   | µg/m³                | 1           |
| Freon-113                                  | ND    | 2.5  |   | µg/m³                | 1           |
| Freon-114                                  | ND    | 12   |   | µg/m³                | 1           |
| Heptane                                    | 2.3   | 1.3  |   | µg/m³                | 1           |
| Hexachlorobutadiene                        | ND    | 3.5  |   | µg/m³                | 1           |
| Hexane                                     | 4.1   | 3    |   | µg/m³                | 1           |
| Isopropyl Alcohol                          | ND    | 4.1  |   | µg/m³                | 1           |
| m,p-Xylene                                 | ND    | 3    |   | µg/m³                | 1           |
| Methyl tert-butyl ether                    | ND    | 1.2  |   | µg/m³                | 1           |
| Methylene chloride                         | ND    | 11   |   | µg/m³                | 1           |
| o-Xylene                                   | ND    | 1.5  |   | µg/m³                | 1           |
| Propene                                    | ND    | 5.8  |   | µg/m³                | 1           |
| Styrene                                    | ND    | 1.5  |   | µg/m³                | 1           |
| Tetrachloroethene                          | ND    | 2.3  |   | µg/m³                | 1           |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

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H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-006

**Client Sample ID:** SV-05**Collection Date** 8/21/2012 3:25:00 PM**Matrix:** Air

| Analyses  | Result | RL   | Qualifier | Units | DF | Date Analyzed |
|---|--------|------|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> <b>TO-15</b> Prep Date: <b>8/23/2012</b> Analyst: <b>VP</b> |        |      |           |       |    |               |
| Tetrahydrofuran   | ND     | 2.5  |           | µg/m³ | 1  | 8/24/2012     |
| Toluene   | 5.3    | 1.3  |           | µg/m³ | 1  | 8/24/2012     |
| trans-1,2-Dichloroethene  | 8.9    | 1.3  |           | µg/m³ | 1  | 8/24/2012     |
| trans-1,2-Dichloroethene  | 9      | 1.3  |           | µg/m³ | 1  | 8/28/2012     |
| trans-1,3-Dichloropropene   | ND     | 1.5  |           | µg/m³ | 1  | 8/24/2012     |
| Trichloroethene   | 30     | 1.8  |           | µg/m³ | 1  | 8/24/2012     |
| Trichloroethene   | 28     | 1.8  |           | µg/m³ | 1  | 8/28/2012     |
| Trichlorofluoromethane  | ND     | 1.8  |           | µg/m³ | 1  | 8/24/2012     |
| Vinyl acetate   | ND     | 12   |           | µg/m³ | 1  | 8/24/2012     |
| Vinyl chloride  | 23     | 0.82 |           | µg/m³ | 1  | 8/24/2012     |
| Vinyl chloride  | 24     | 0.82 |           | µg/m³ | 1  | 8/28/2012     |
| Xylenes, Total  | ND     | 4.3  |           | µg/m³ | 1  | 8/24/2012     |

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
HT - Sample received past holding time  
\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
H - Holding time exceeded

# STAT Analysis Corporation

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-007

**Client Sample ID:** SV-06

**Collection Date** 8/21/2012 4:00:00 PM

**Matrix:** Air

| Analyses  |       | Result | RL | Qualifier | Units                | DF | Date Analyzed |
|---|-------|--------|----|-----------|----------------------|----|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |       |        |    |           |                      |    |               |
|   | TO-15 |        |    |           | Prep Date: 8/23/2012 |    | Analyst: VP   |
| 1,1,1-Trichloroethane                             | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,1,2,2-Tetrachloroethane                         | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,1,2-Trichloroethane                             | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,1-Dichloroethane                                | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,1-Dichloroethene                                | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,2,4-Trichlorobenzene                            | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,2,4-Trimethylbenzene                            | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,2-Dibromoethane                                 | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,2-Dichlorobenzene                               | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,2-Dichloroethane                                | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,2-Dichloropropane                               | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,3,5-Trimethylbenzene                            | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,3-Butadiene                                     | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,3-Dichlorobenzene                               | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,4-Dichlorobenzene                               | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 1,4-Dioxane                                       | ND    | 0.9    |    | ppbv      | 1                    |    | 8/28/2012     |
| 2-Butanone  | ND    | 0.9    |    | ppbv      | 1                    |    | 8/28/2012     |
| 2-Hexanone  | ND    | 1.8    |    | ppbv      | 1                    |    | 8/28/2012     |
| 4-Ethyltoluene                                    | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| 4-Methyl-2-pentanone                              | ND    | 1.8    |    | ppbv      | 1                    |    | 8/28/2012     |
| Acetone   | 16    | 3.6    | *  | ppbv      | 1                    |    | 8/28/2012     |
| Benzene   | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| Benzyl chloride                                   | ND    | 0.9    |    | ppbv      | 1                    |    | 8/28/2012     |
| Bromodichloromethane                              | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| Bromoform   | ND    | 0.9    |    | ppbv      | 1                    |    | 8/28/2012     |
| Bromomethane                                      | ND    | 0.9    |    | ppbv      | 1                    |    | 8/28/2012     |
| Carbon disulfide                                  | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| Carbon tetrachloride                              | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| Chlorobenzene                                     | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| Chloroethane                                      | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| Chloroform  | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| Chloromethane                                     | ND    | 0.9    |    | ppbv      | 1                    |    | 8/28/2012     |
| cis-1,2-Dichloroethene                            | 16    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| cis-1,3-Dichloropropene                           | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| Cyclohexane                                       | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| Dibromochloromethane                              | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| Dichlorodifluoromethane                           | 0.47  | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |
| Ethyl acetate                                     | ND    | 0.36   |    | ppbv      | 1                    |    | 8/28/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

# STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-007

**Client Sample ID:** SV-06

**Collection Date** 8/21/2012 4:00:00 PM

**Matrix:** Air

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|----------|--------|----|-----------|-------|----|---------------|
|----------|--------|----|-----------|-------|----|---------------|

|   |      |              |      |                             |                    |
|---|------|--------------|------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |      | <b>TO-15</b> |      | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| Ethylbenzene                                      | ND   | 0.36         | ppbv | 1                           | 8/28/2012          |
| Freon-113   | ND   | 0.36         | ppbv | 1                           | 8/28/2012          |
| Freon-114   | ND   | 1.8          | ppbv | 1                           | 8/28/2012          |
| Heptane   | ND   | 0.36         | ppbv | 1                           | 8/28/2012          |
| Hexachlorobutadiene                               | ND   | 0.36         | ppbv | 1                           | 8/28/2012          |
| Hexane  | ND   | 0.9          | ppbv | 1                           | 8/28/2012          |
| Isopropyl Alcohol                                 | ND   | 1.8          | ppbv | 1                           | 8/28/2012          |
| m,p-Xylene  | ND   | 0.72         | ppbv | 1                           | 8/28/2012          |
| Methyl tert-butyl ether                           | ND   | 0.36         | ppbv | 1                           | 8/28/2012          |
| Methylene chloride                                | ND   | 3.6          | ppbv | 1                           | 8/28/2012          |
| o-Xylene  | ND   | 0.36         | ppbv | 1                           | 8/28/2012          |
| Propene   | ND   | 3.6          | ppbv | 1                           | 8/28/2012          |
| Styrene   | ND   | 0.36         | ppbv | 1                           | 8/28/2012          |
| Tetrachloroethene                                 | ND   | 0.36         | ppbv | 1                           | 8/28/2012          |
| Tetrahydrofuran                                   | ND   | 0.9          | ppbv | 1                           | 8/28/2012          |
| Toluene   | 0.43 | 0.36         | ppbv | 1                           | 8/28/2012          |
| trans-1,2-Dichloroethene                          | ND   | 0.36         | ppbv | 1                           | 8/28/2012          |
| trans-1,3-Dichloropropene                         | ND   | 0.36         | ppbv | 1                           | 8/28/2012          |
| Trichloroethene                                   | 0.78 | 0.36         | ppbv | 1                           | 8/28/2012          |
| Trichlorofluoromethane                            | ND   | 0.36         | ppbv | 1                           | 8/28/2012          |
| Vinyl acetate                                     | ND   | 3.6          | ppbv | 1                           | 8/28/2012          |
| Vinyl chloride                                    | 0.9  | 0.36         | ppbv | 1                           | 8/28/2012          |
| Xylenes, Total                                    | ND   | 1.1          | ppbv | 1                           | 8/28/2012          |

|   |    |              |       |                             |                    |
|---|----|--------------|-------|-----------------------------|--------------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |    | <b>TO-15</b> |       | Prep Date: <b>8/23/2012</b> | Analyst: <b>VP</b> |
| 1,1,1-Trichloroethane                             | ND | 2            | µg/m³ | 1                           | 8/28/2012          |
| 1,1,2,2-Tetrachloroethane                         | ND | 2.5          | µg/m³ | 1                           | 8/28/2012          |
| 1,1,2-Trichloroethane                             | ND | 2            | µg/m³ | 1                           | 8/28/2012          |
| 1,1-Dichloroethane                                | ND | 1.4          | µg/m³ | 1                           | 8/28/2012          |
| 1,1-Dichloroethene                                | ND | 1.4          | µg/m³ | 1                           | 8/28/2012          |
| 1,2,4-Trichlorobenzene                            | ND | 2.7          | µg/m³ | 1                           | 8/28/2012          |
| 1,2,4-Trimethylbenzene                            | ND | 1.8          | µg/m³ | 1                           | 8/28/2012          |
| 1,2-Dibromoethane                                 | ND | 2.7          | µg/m³ | 1                           | 8/28/2012          |
| 1,2-Dichlorobenzene                               | ND | 2.2          | µg/m³ | 1                           | 8/28/2012          |
| 1,2-Dichloroethane                                | ND | 1.4          | µg/m³ | 1                           | 8/28/2012          |
| 1,2-Dichloropropane                               | ND | 1.6          | µg/m³ | 1                           | 8/28/2012          |
| 1,3,5-Trimethylbenzene                            | ND | 1.8          | µg/m³ | 1                           | 8/28/2012          |
| 1,3-Butadiene                                     | ND | 0.72         | µg/m³ | 1                           | 8/28/2012          |
| 1,3-Dichlorobenzene                               | ND | 2.2          | µg/m³ | 1                           | 8/28/2012          |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-007

**Client Sample ID:** SV-06**Collection Date** 8/21/2012 4:00:00 PM**Matrix:** Air

| <b>Analyses</b> | <b>Result</b> | <b>RL</b> | <b>Qualifier</b> | <b>Units</b> | <b>DF</b> | <b>Date Analyzed</b> |
|-----------------|---------------|-----------|------------------|--------------|-----------|----------------------|
|-----------------|---------------|-----------|------------------|--------------|-----------|----------------------|

| <b>Volatile Organic Compounds in Air by GC/MS</b> | <b>TO-15</b> |     |   | <b>Prep Date:</b> | <b>8/23/2012</b> | <b>Analyst:</b> |
|---|--------------|-----|---|-------------------|------------------|-----------------|
| 1,4-Dichlorobenzene                               | ND           | 2.2 |   | µg/m³             | 1                | 8/28/2012       |
| 1,4-Dioxane                                       | ND           | 3.2 |   | µg/m³             | 1                | 8/28/2012       |
| 2-Butanone  | ND           | 2.7 |   | µg/m³             | 1                | 8/28/2012       |
| 2-Hexanone  | ND           | 7.4 |   | µg/m³             | 1                | 8/28/2012       |
| 4-Ethyltoluene                                    | ND           | 1.8 |   | µg/m³             | 1                | 8/28/2012       |
| 4-Methyl-2-pentanone                              | ND           | 7.4 |   | µg/m³             | 1                | 8/28/2012       |
| Acetone   | 39           | 8.7 | * | µg/m³             | 1                | 8/28/2012       |
| Benzene   | ND           | 1.1 |   | µg/m³             | 1                | 8/28/2012       |
| Benzyl chloride                                   | ND           | 4.7 |   | µg/m³             | 1                | 8/28/2012       |
| Bromodichloromethane                              | ND           | 2.3 |   | µg/m³             | 1                | 8/28/2012       |
| Bromoform   | ND           | 9.4 |   | µg/m³             | 1                | 8/28/2012       |
| Bromomethane                                      | ND           | 3.4 |   | µg/m³             | 1                | 8/28/2012       |
| Carbon disulfide                                  | ND           | 1.1 |   | µg/m³             | 1                | 8/28/2012       |
| Carbon tetrachloride                              | ND           | 2.3 |   | µg/m³             | 1                | 8/28/2012       |
| Chlorobenzene                                     | ND           | 1.6 |   | µg/m³             | 1                | 8/28/2012       |
| Chloroethane                                      | ND           | 0.9 |   | µg/m³             | 1                | 8/28/2012       |
| Chloroform  | ND           | 1.8 |   | µg/m³             | 1                | 8/28/2012       |
| Chloromethane                                     | ND           | 1.8 |   | µg/m³             | 1                | 8/28/2012       |
| cis-1,2-Dichloroethene                            | 64           | 1.4 |   | µg/m³             | 1                | 8/28/2012       |
| cis-1,3-Dichloropropene                           | ND           | 1.6 |   | µg/m³             | 1                | 8/28/2012       |
| Cyclohexane                                       | ND           | 1.3 |   | µg/m³             | 1                | 8/28/2012       |
| Dibromochloromethane                              | ND           | 3.1 |   | µg/m³             | 1                | 8/28/2012       |
| Dichlorodifluoromethane                           | 2.3          | 1.8 |   | µg/m³             | 1                | 8/28/2012       |
| Ethyl acetate                                     | ND           | 1.3 |   | µg/m³             | 1                | 8/28/2012       |
| Ethylbenzene                                      | ND           | 1.6 |   | µg/m³             | 1                | 8/28/2012       |
| Freon-113   | ND           | 2.7 |   | µg/m³             | 1                | 8/28/2012       |
| Freon-114   | ND           | 13  |   | µg/m³             | 1                | 8/28/2012       |
| Heptane   | ND           | 1.4 |   | µg/m³             | 1                | 8/28/2012       |
| Hexachlorobutadiene                               | ND           | 3.8 |   | µg/m³             | 1                | 8/28/2012       |
| Hexane  | ND           | 3.2 |   | µg/m³             | 1                | 8/28/2012       |
| Isopropyl Alcohol                                 | ND           | 4.5 |   | µg/m³             | 1                | 8/28/2012       |
| m,p-Xylene  | ND           | 3.1 |   | µg/m³             | 1                | 8/28/2012       |
| Methyl tert-butyl ether                           | ND           | 1.3 |   | µg/m³             | 1                | 8/28/2012       |
| Methylene chloride                                | ND           | 12  |   | µg/m³             | 1                | 8/28/2012       |
| o-Xylene  | ND           | 1.6 |   | µg/m³             | 1                | 8/28/2012       |
| Propene   | ND           | 6.1 |   | µg/m³             | 1                | 8/28/2012       |
| Styrene   | ND           | 1.6 |   | µg/m³             | 1                | 8/28/2012       |
| Tetrachloroethene                                 | ND           | 2.5 |   | µg/m³             | 1                | 8/28/2012       |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-007

**Client Sample ID:** SV-06**Collection Date** 8/21/2012 4:00:00 PM**Matrix:** Air

| Analyses  | Result | RL  | Qualifier | Units | DF | Date Analyzed |
|---|--------|-----|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> <b>TO-15</b> Prep Date: <b>8/23/2012</b> Analyst: <b>VP</b> |        |     |           |       |    |               |
| Tetrahydrofuran   | ND     | 2.7 |           | µg/m³ | 1  | 8/28/2012     |
| Toluene   | 1.6    | 1.4 |           | µg/m³ | 1  | 8/28/2012     |
| trans-1,2-Dichloroethene  | ND     | 1.4 |           | µg/m³ | 1  | 8/28/2012     |
| trans-1,3-Dichloropropene   | ND     | 1.6 |           | µg/m³ | 1  | 8/28/2012     |
| Trichloroethene   | 4.2    | 2   |           | µg/m³ | 1  | 8/28/2012     |
| Trichlorofluoromethane  | ND     | 2   |           | µg/m³ | 1  | 8/28/2012     |
| Vinyl acetate   | ND     | 13  |           | µg/m³ | 1  | 8/28/2012     |
| Vinyl chloride  | 2.3    | 0.9 |           | µg/m³ | 1  | 8/28/2012     |
| Xylenes, Total  | ND     | 4.7 |           | µg/m³ | 1  | 8/28/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-008

**Client Sample ID:** Field Blank  
**Collection Date** 8/21/2012  
**Matrix:** Air

| Analyses  | Result | RL    | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|-------|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |       |           |       |                      |               |
|   |        | TO-15 |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,1,1-Trichloroethane                             | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,1,2,2-Tetrachloroethane                         | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,1,2-Trichloroethane                             | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,1-Dichloroethane                                | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,1-Dichloroethene                                | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,2,4-Trichlorobenzene                            | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,2,4-Trimethylbenzene                            | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,2-Dibromoethane                                 | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,2-Dichlorobenzene                               | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,2-Dichloroethane                                | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,2-Dichloropropane                               | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,3,5-Trimethylbenzene                            | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,3-Butadiene                                     | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,3-Dichlorobenzene                               | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,4-Dichlorobenzene                               | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 1,4-Dioxane                                       | ND     | 0.5   |           | ppbv  | 1                    | 8/23/2012     |
| 2-Butanone  | ND     | 0.5   |           | ppbv  | 1                    | 8/23/2012     |
| 2-Hexanone  | ND     | 1     |           | ppbv  | 1                    | 8/23/2012     |
| 4-Ethyltoluene                                    | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| 4-Methyl-2-pentanone                              | ND     | 1     |           | ppbv  | 1                    | 8/23/2012     |
| Acetone   | ND     | 2     | *         | ppbv  | 1                    | 8/23/2012     |
| Benzene   | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| Benzyl chloride                                   | ND     | 0.5   |           | ppbv  | 1                    | 8/23/2012     |
| Bromodichloromethane                              | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| Bromoform   | ND     | 0.5   |           | ppbv  | 1                    | 8/23/2012     |
| Bromomethane                                      | ND     | 0.5   |           | ppbv  | 1                    | 8/23/2012     |
| Carbon disulfide                                  | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| Carbon tetrachloride                              | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| Chlorobenzene                                     | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| Chloroethane                                      | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| Chloroform  | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| Chloromethane                                     | ND     | 0.5   |           | ppbv  | 1                    | 8/23/2012     |
| cis-1,2-Dichloroethene                            | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| cis-1,3-Dichloropropene                           | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| Cyclohexane                                       | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| Dibromochloromethane                              | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| Dichlorodifluoromethane                           | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |
| Ethyl acetate                                     | ND     | 0.2   |           | ppbv  | 1                    | 8/23/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-008

**Client Sample ID:** Field Blank  
**Collection Date** 8/21/2012  
**Matrix:** Air

| Analyses  | Result | RL  | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|-----|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |     |           |       |                      |               |
|   | TO-15  |     |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| Ethylbenzene                                      | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Freon-113   | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Freon-114   | ND     | 1   |           | ppbv  | 1                    | 8/23/2012     |
| Heptane   | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Hexachlorobutadiene                               | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Hexane  | ND     | 0.5 |           | ppbv  | 1                    | 8/23/2012     |
| Isopropyl Alcohol                                 | ND     | 1   |           | ppbv  | 1                    | 8/23/2012     |
| m,p-Xylene  | ND     | 0.4 |           | ppbv  | 1                    | 8/23/2012     |
| Methyl tert-butyl ether                           | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Methylene chloride                                | ND     | 2   |           | ppbv  | 1                    | 8/23/2012     |
| o-Xylene  | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Propene   | ND     | 2   |           | ppbv  | 1                    | 8/23/2012     |
| Styrene   | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Tetrachloroethene                                 | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Tetrahydrofuran                                   | ND     | 0.5 |           | ppbv  | 1                    | 8/23/2012     |
| Toluene   | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| trans-1,2-Dichloroethene                          | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| trans-1,3-Dichloropropene                         | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Trichloroethene                                   | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Trichlorofluoromethane                            | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Vinyl acetate                                     | ND     | 2   |           | ppbv  | 1                    | 8/23/2012     |
| Vinyl chloride                                    | ND     | 0.2 |           | ppbv  | 1                    | 8/23/2012     |
| Xylenes, Total                                    | ND     | 0.6 |           | ppbv  | 1                    | 8/23/2012     |
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |     |           |       |                      |               |
|   | TO-15  |     |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,1,1-Trichloroethane                             | ND     | 1.1 |           | µg/m³ | 1                    | 8/23/2012     |
| 1,1,2,2-Tetrachloroethane                         | ND     | 1.4 |           | µg/m³ | 1                    | 8/23/2012     |
| 1,1,2-Trichloroethane                             | ND     | 1.1 |           | µg/m³ | 1                    | 8/23/2012     |
| 1,1-Dichloroethane                                | ND     | 0.8 |           | µg/m³ | 1                    | 8/23/2012     |
| 1,1-Dichloroethene                                | ND     | 0.8 |           | µg/m³ | 1                    | 8/23/2012     |
| 1,2,4-Trichlorobenzene                            | ND     | 1.5 |           | µg/m³ | 1                    | 8/23/2012     |
| 1,2,4-Trimethylbenzene                            | ND     | 1   |           | µg/m³ | 1                    | 8/23/2012     |
| 1,2-Dibromoethane                                 | ND     | 1.5 |           | µg/m³ | 1                    | 8/23/2012     |
| 1,2-Dichlorobenzene                               | ND     | 1.2 |           | µg/m³ | 1                    | 8/23/2012     |
| 1,2-Dichloroethane                                | ND     | 0.8 |           | µg/m³ | 1                    | 8/23/2012     |
| 1,2-Dichloropropane                               | ND     | 0.9 |           | µg/m³ | 1                    | 8/23/2012     |
| 1,3,5-Trimethylbenzene                            | ND     | 1   |           | µg/m³ | 1                    | 8/23/2012     |
| 1,3-Butadiene                                     | ND     | 0.4 |           | µg/m³ | 1                    | 8/23/2012     |
| 1,3-Dichlorobenzene                               | ND     | 1.2 |           | µg/m³ | 1                    | 8/23/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

# STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 31, 2012

Date Printed: December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-008

**Client Sample ID:** Field Blank  
**Collection Date** 8/21/2012  
**Matrix:** Air

| Analyses  | Result | RL   | Qualifier | Units | DF                   | Date Analyzed |
|---|--------|------|-----------|-------|----------------------|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> |        |      |           |       |                      |               |
|   | TO-15  |      |           |       | Prep Date: 8/23/2012 | Analyst: VP   |
| 1,4-Dichlorobenzene                               | ND     | 1.2  |           | µg/m³ | 1                    | 8/23/2012     |
| 1,4-Dioxane                                       | ND     | 1.8  |           | µg/m³ | 1                    | 8/23/2012     |
| 2-Butanone  | ND     | 1.5  |           | µg/m³ | 1                    | 8/23/2012     |
| 2-Hexanone  | ND     | 4.1  |           | µg/m³ | 1                    | 8/23/2012     |
| 4-Ethyltoluene                                    | ND     | 1    |           | µg/m³ | 1                    | 8/23/2012     |
| 4-Methyl-2-pentanone                              | ND     | 4.1  |           | µg/m³ | 1                    | 8/23/2012     |
| Acetone   | ND     | 4.8  | *         | µg/m³ | 1                    | 8/23/2012     |
| Benzene   | ND     | 0.6  |           | µg/m³ | 1                    | 8/23/2012     |
| Benzyl chloride                                   | ND     | 2.6  |           | µg/m³ | 1                    | 8/23/2012     |
| Bromodichloromethane                              | ND     | 1.3  |           | µg/m³ | 1                    | 8/23/2012     |
| Bromoform   | ND     | 5.2  |           | µg/m³ | 1                    | 8/23/2012     |
| Bromomethane                                      | ND     | 1.9  |           | µg/m³ | 1                    | 8/23/2012     |
| Carbon disulfide                                  | ND     | 0.62 |           | µg/m³ | 1                    | 8/23/2012     |
| Carbon tetrachloride                              | ND     | 1.3  |           | µg/m³ | 1                    | 8/23/2012     |
| Chlorobenzene                                     | ND     | 0.9  |           | µg/m³ | 1                    | 8/23/2012     |
| Chloroethane                                      | ND     | 0.5  |           | µg/m³ | 1                    | 8/23/2012     |
| Chloroform  | ND     | 1    |           | µg/m³ | 1                    | 8/23/2012     |
| Chloromethane                                     | ND     | 1    |           | µg/m³ | 1                    | 8/23/2012     |
| cis-1,2-Dichloroethene                            | ND     | 0.8  |           | µg/m³ | 1                    | 8/23/2012     |
| cis-1,3-Dichloropropene                           | ND     | 0.9  |           | µg/m³ | 1                    | 8/23/2012     |
| Cyclohexane                                       | ND     | 0.7  |           | µg/m³ | 1                    | 8/23/2012     |
| Dibromochloromethane                              | ND     | 1.7  |           | µg/m³ | 1                    | 8/23/2012     |
| Dichlorodifluoromethane                           | ND     | 1    |           | µg/m³ | 1                    | 8/23/2012     |
| Ethyl acetate                                     | ND     | 0.7  |           | µg/m³ | 1                    | 8/23/2012     |
| Ethylbenzene                                      | ND     | 0.9  |           | µg/m³ | 1                    | 8/23/2012     |
| Freon-113   | ND     | 1.5  |           | µg/m³ | 1                    | 8/23/2012     |
| Freon-114   | ND     | 7    |           | µg/m³ | 1                    | 8/23/2012     |
| Heptane   | ND     | 0.8  |           | µg/m³ | 1                    | 8/23/2012     |
| Hexachlorobutadiene                               | ND     | 2.1  |           | µg/m³ | 1                    | 8/23/2012     |
| Hexane  | ND     | 1.8  |           | µg/m³ | 1                    | 8/23/2012     |
| Isopropyl Alcohol                                 | ND     | 2.5  |           | µg/m³ | 1                    | 8/23/2012     |
| m,p-Xylene  | ND     | 1.7  |           | µg/m³ | 1                    | 8/23/2012     |
| Methyl tert-butyl ether                           | ND     | 0.7  |           | µg/m³ | 1                    | 8/23/2012     |
| Methylene chloride                                | ND     | 6.9  |           | µg/m³ | 1                    | 8/23/2012     |
| o-Xylene  | ND     | 0.9  |           | µg/m³ | 1                    | 8/23/2012     |
| Propene   | ND     | 3.4  |           | µg/m³ | 1                    | 8/23/2012     |
| Styrene   | ND     | 0.9  |           | µg/m³ | 1                    | 8/23/2012     |
| Tetrachloroethene                                 | ND     | 1.4  |           | µg/m³ | 1                    | 8/23/2012     |

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT** Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Date Reported:** December 31, 2012**Date Printed:** December 31, 2012

**Client:** Terracon Consultants, Inc.  
**Lab Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL  
**Lab ID:** 12080703-008

**Client Sample ID:** Field Blank  
**Collection Date** 8/21/2012  
**Matrix:** Air

| Analyses  | Result | RL  | Qualifier | Units | DF | Date Analyzed |
|---|--------|-----|-----------|-------|----|---------------|
| <b>Volatile Organic Compounds in Air by GC/MS</b> <b>TO-15</b> Prep Date: <b>8/23/2012</b> Analyst: <b>VP</b> |        |     |           |       |    |               |
| Tetrahydrofuran   | ND     | 1.5 |           | µg/m³ | 1  | 8/23/2012     |
| Toluene   | ND     | 0.8 |           | µg/m³ | 1  | 8/23/2012     |
| trans-1,2-Dichloroethene  | ND     | 0.8 |           | µg/m³ | 1  | 8/23/2012     |
| trans-1,3-Dichloropropene   | ND     | 0.9 |           | µg/m³ | 1  | 8/23/2012     |
| Trichloroethene   | ND     | 1.1 |           | µg/m³ | 1  | 8/23/2012     |
| Trichlorofluoromethane  | ND     | 1.1 |           | µg/m³ | 1  | 8/23/2012     |
| Vinyl acetate   | ND     | 7   |           | µg/m³ | 1  | 8/23/2012     |
| Vinyl chloride  | ND     | 0.5 |           | µg/m³ | 1  | 8/23/2012     |
| Xylenes, Total  | ND     | 2.6 |           | µg/m³ | 1  | 8/23/2012     |

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**STAT Analysis Corporation****Sample Receipt Checklist**

Client Name TERRACON - CHICAGO

Date and Time Received: 8/21/2012 5:00:00 PM

Work Order Number 12080703

Received by: KDC

Checklist completed by:

Signature

Date

8/21/12

Reviewed by:

Initials

KL

8|23|12

Date

Matrix:

Carrier name: Client Delivered

Shipping container/cooler in good condition? Yes  No  Not Present Custody seals intact on shipping container/cooler? Yes  No  Not Present Custody seals intact on sample bottles? Yes  No  Not Present Chain of custody present? Yes  No Chain of custody signed when relinquished and received? Yes  No Chain of custody agrees with sample labels/containers? Yes  No Samples in proper container/bottle? Yes  No Sample containers intact? Yes  No Sufficient sample volume for indicated test? Yes  No All samples received within holding time? Yes  No Container or Temp Blank temperature in compliance? Yes  No  Temperature Ambient °CWater - VOA vials have zero headspace? No VOA vials submitted  Yes  No Water - Samples pH checked? Yes  No  Checked by: \_\_\_\_\_Water - Samples properly preserved? Yes  No  pH Adjusted? \_\_\_\_\_

Any No response must be detailed in the comments section below.

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Client / Person contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Contacted by: \_\_\_\_\_

Response: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82785

| Sample ID: MB082312-5     | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               | Run ID: VOA-5_120823A |          |           |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15     |             | Analysis Date: 8/23/2012 | SeqNo: 2226897        |          |           |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC                  | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,2,4-Trichlorobenzene    | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,2,4-Trimethylbenzene    | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,2-Dibromoethane         | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,2-Dichlorobenzene       | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,3,5-Trimethylbenzene    | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,3-Butadiene             | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,3-Dichlorobenzene       | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,4-Dichlorobenzene       | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 1,4-Dioxane               | ND               | 1.0               |             |                          |                       |          |           |             |      |          |      |
| 2-Butanone                | ND               | 0.50              |             |                          |                       |          |           |             |      |          |      |
| 2-Hexanone                | ND               | 1.0               |             |                          |                       |          |           |             |      |          |      |
| 4-Ethyltoluene            | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 1.0               |             |                          |                       |          |           |             |      |          |      |
| Acetone                   | ND               | 2.0               |             |                          |                       |          |           |             |      |          | *    |
| Benzene                   | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Benzyl chloride           | ND               | 0.50              |             |                          |                       |          |           |             |      |          |      |
| Bromodichloromethane      | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Bromoform                 | ND               | 0.50              |             |                          |                       |          |           |             |      |          |      |
| Bromomethane              | ND               | 0.50              |             |                          |                       |          |           |             |      |          |      |
| Carbon disulfide          | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Chlorobenzene             | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Chloroethane              | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82785

| Sample ID: MB082312-5     | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120823A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15     |             | Analysis Date: 8/23/2012 |      |          | SeqNo: 2226897        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloroform                | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloromethane             | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| cis-1,3-Dichloropropene   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Cyclohexane               | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dichlorodifluoromethane   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethyl acetate             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-113                 | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-114                 | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| Heptane                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexachlorobutadiene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexane                    | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Isopropyl Alcohol         | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| m,p-Xylene                | ND               | 0.40              |             |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| o-Xylene                  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Propene                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Styrene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrahydrofuran           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichlorofluoromethane    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Vinyl acetate             | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 0.60              |             |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82785

| Sample ID: C082112-2      | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120823A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15     |             | Analysis Date: 8/23/2012 |      |          | SeqNo: 2226905        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trichlorobenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dibromoethane         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3,5-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Butadiene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dioxane               | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 2-Butanone                | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| 2-Hexanone                | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 4-Ethyltoluene            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| Acetone                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          | *    |
| Benzene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Benzyl chloride           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromodichloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Bromoform                 | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82785

| Sample ID: C082112-2      | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120823A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15     |             | Analysis Date: 8/23/2012 |      |          | SeqNo: 2226905        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloromethane             | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| cis-1,3-Dichloropropene   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Cyclohexane               | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dichlorodifluoromethane   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethyl acetate             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-113                 | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-114                 | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| Heptane                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexachlorobutadiene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexane                    | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Isopropyl Alcohol         | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| m,p-Xylene                | ND               | 0.40              |             |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| o-Xylene                  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Propene                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Styrene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrahydrofuran           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichlorofluoromethane    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Vinyl acetate             | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 0.60              |             |                          |      |          |                       |             |      |          |      |

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B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080703

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82785

| Sample ID: LCS082312-5    | SampType: LCS    | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120823A |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15     |             | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2226899        |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 4.26             | 0.20              | 5           | 0                        | 85.2 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1,2,2-Tetrachloroethane | 5.78             | 0.20              | 5           | 0                        | 116  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1,2-Trichloroethane     | 5.4              | 0.20              | 5           | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1-Dichloroethane        | 5.24             | 0.20              | 5           | 0                        | 105  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1-Dichloroethene        | 5.04             | 0.20              | 5           | 0                        | 101  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2,4-Trichlorobenzene    | 4.67             | 0.20              | 5           | 0                        | 93.4 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2,4-Trimethylbenzene    | 4.79             | 0.20              | 5           | 0                        | 95.8 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dibromoethane         | 4.84             | 0.20              | 5           | 0                        | 96.8 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dichlorobenzene       | 4.98             | 0.20              | 5           | 0                        | 99.6 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dichloroethane        | 5.28             | 0.20              | 5           | 0                        | 106  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dichloropropane       | 5.15             | 0.20              | 5           | 0                        | 103  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,3,5-Trimethylbenzene    | 5.17             | 0.20              | 5           | 0                        | 103  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,3-Butadiene             | 4.97             | 0.20              | 5           | 0                        | 99.4 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,3-Dichlorobenzene       | 4.56             | 0.20              | 5           | 0                        | 91.2 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,4-Dichlorobenzene       | 4.79             | 0.20              | 5           | 0                        | 95.8 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,4-Dioxane               | 4.12             | 1.0               | 5           | 0                        | 82.4 | 70       | 130       | 0                     | 0    | 0        |      |
| 2-Butanone                | 4.98             | 0.50              | 5           | 0                        | 99.6 | 70       | 130       | 0                     | 0    | 0        |      |
| 2-Hexanone                | 4.62             | 1.0               | 5           | 0                        | 92.4 | 70       | 130       | 0                     | 0    | 0        |      |
| 4-Ethyltoluene            | 4.86             | 0.20              | 5           | 0                        | 97.2 | 70       | 130       | 0                     | 0    | 0        |      |
| 4-Methyl-2-pentanone      | 4.6              | 1.0               | 5           | 0                        | 92   | 70       | 130       | 0                     | 0    | 0        |      |
| Acetone                   | 5.02             | 2.0               | 5           | 0                        | 100  | 70       | 130       | 0                     | 0    | 0        | *    |
| Benzene                   | 4.9              | 0.20              | 5           | 0                        | 98   | 70       | 130       | 0                     | 0    | 0        |      |
| Benzyl chloride           | 4.57             | 0.50              | 5           | 0                        | 91.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Bromodichloromethane      | 4.67             | 0.20              | 5           | 0                        | 93.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Bromoform                 | 4.59             | 0.50              | 5           | 0                        | 91.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Bromomethane              | 4.42             | 0.50              | 5           | 0                        | 88.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Carbon disulfide          | 4.48             | 0.20              | 5           | 0                        | 89.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Carbon tetrachloride      | 4.51             | 0.20              | 5           | 0                        | 90.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Chlorobenzene             | 4.65             | 0.20              | 5           | 0                        | 93   | 70       | 130       | 0                     | 0    | 0        |      |
| Chloroethane              | 5.54             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 0                     | 0    | 0        |      |
| Chloroform                | 4.71             | 0.20              | 5           | 0                        | 94.2 | 70       | 130       | 0                     | 0    | 0        |      |

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**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080703

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82785

| Sample ID: LCS082312-5    | SampType: LCS    | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120823A |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15     |             | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2226899        |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| Chloromethane             | 4.02             | 0.50              | 5           | 0                        | 80.4 | 70       | 130       | 0                     | 0    | 0        |      |
| cis-1,2-Dichloroethene    | 4.76             | 0.20              | 5           | 0                        | 95.2 | 70       | 130       | 0                     | 0    | 0        |      |
| cis-1,3-Dichloropropene   | 5.32             | 0.20              | 5           | 0                        | 106  | 70       | 130       | 0                     | 0    | 0        |      |
| Cyclohexane               | 5.22             | 0.20              | 5           | 0                        | 104  | 70       | 130       | 0                     | 0    | 0        |      |
| Dibromochloromethane      | 4.73             | 0.20              | 5           | 0                        | 94.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Dichlorodifluoromethane   | 4.22             | 0.20              | 5           | 0                        | 84.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Ethyl acetate             | 5.21             | 0.20              | 5           | 0                        | 104  | 70       | 130       | 0                     | 0    | 0        |      |
| Ethylbenzene              | 4.87             | 0.20              | 5           | 0                        | 97.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Freon-113                 | 4.01             | 0.20              | 5           | 0                        | 80.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Freon-114                 | 3.97             | 1.0               | 5           | 0                        | 79.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Heptane                   | 5.95             | 0.20              | 5           | 0                        | 119  | 70       | 130       | 0                     | 0    | 0        |      |
| Hexachlorobutadiene       | 4                | 0.20              | 5           | 0                        | 80   | 70       | 130       | 0                     | 0    | 0        |      |
| Hexane                    | 5.93             | 0.50              | 5           | 0                        | 119  | 70       | 130       | 0                     | 0    | 0        |      |
| Isopropyl Alcohol         | 5.42             | 1.0               | 5           | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| m,p-Xylene                | 9.84             | 0.40              | 10          | 0                        | 98.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Methyl tert-butyl ether   | 5.28             | 0.20              | 5           | 0                        | 106  | 70       | 130       | 0                     | 0    | 0        |      |
| Methylene chloride        | 4.01             | 2.0               | 5           | 0                        | 80.2 | 70       | 130       | 0                     | 0    | 0        |      |
| o-Xylene                  | 4.9              | 0.20              | 5           | 0                        | 98   | 70       | 130       | 0                     | 0    | 0        |      |
| Propene                   | 4.87             | 2.0               | 5           | 0                        | 97.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Styrene                   | 5.33             | 0.20              | 5           | 0                        | 107  | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrachloroethene         | 4.32             | 0.20              | 5           | 0                        | 86.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrahydrofuran           | 5.25             | 0.50              | 5           | 0                        | 105  | 70       | 130       | 0                     | 0    | 0        |      |
| Toluene                   | 4.95             | 0.20              | 5           | 0                        | 99   | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,2-Dichloroethene  | 4.76             | 0.20              | 5           | 0                        | 95.2 | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,3-Dichloropropene | 3.95             | 0.20              | 5           | 0                        | 79   | 70       | 130       | 0                     | 0    | 0        |      |
| Trichloroethene           | 4.55             | 0.20              | 5           | 0                        | 91   | 70       | 130       | 0                     | 0    | 0        |      |
| Trichlorofluoromethane    | 3.59             | 0.20              | 5           | 0                        | 71.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl acetate             | 3.94             | 2.0               | 5           | 0                        | 78.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl chloride            | 4.64             | 0.20              | 5           | 0                        | 92.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Xylenes, Total            | 14.74            | 0.60              | 15          | 0                        | 98.3 | 70       | 130       | 0                     | 0    | 0        |      |

**Qualifiers:**

ND - Not Detected at the Reporting Limit

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H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080703

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82785

| Sample ID: LCSD082312-5   | SampType: LCSD   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120823A |       |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15     |             | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2226900        |       |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 4.33             | 0.20              | 5           | 0                        | 86.6 | 70       | 130       | 4.26                  | 1.63  | 25       |      |
| 1,1,2,2-Tetrachloroethane | 5.8              | 0.20              | 5           | 0                        | 116  | 70       | 130       | 5.78                  | 0.345 | 25       |      |
| 1,1,2-Trichloroethane     | 5.45             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 5.4                   | 0.922 | 25       |      |
| 1,1-Dichloroethane        | 5.26             | 0.20              | 5           | 0                        | 105  | 70       | 130       | 5.24                  | 0.381 | 25       |      |
| 1,1-Dichloroethene        | 5.07             | 0.20              | 5           | 0                        | 101  | 70       | 130       | 5.04                  | 0.593 | 25       |      |
| 1,2,4-Trichlorobenzene    | 4.8              | 0.20              | 5           | 0                        | 96   | 70       | 130       | 4.67                  | 2.75  | 25       |      |
| 1,2,4-Trimethylbenzene    | 4.89             | 0.20              | 5           | 0                        | 97.8 | 70       | 130       | 4.79                  | 2.07  | 25       |      |
| 1,2-Dibromoethane         | 4.89             | 0.20              | 5           | 0                        | 97.8 | 70       | 130       | 4.84                  | 1.03  | 25       |      |
| 1,2-Dichlorobenzene       | 4.98             | 0.20              | 5           | 0                        | 99.6 | 70       | 130       | 4.98                  | 0     | 25       |      |
| 1,2-Dichloroethane        | 5.29             | 0.20              | 5           | 0                        | 106  | 70       | 130       | 5.28                  | 0.189 | 25       |      |
| 1,2-Dichloropropane       | 5.18             | 0.20              | 5           | 0                        | 104  | 70       | 130       | 5.15                  | 0.581 | 25       |      |
| 1,3,5-Trimethylbenzene    | 5.26             | 0.20              | 5           | 0                        | 105  | 70       | 130       | 5.17                  | 1.73  | 25       |      |
| 1,3-Butadiene             | 4.97             | 0.20              | 5           | 0                        | 99.4 | 70       | 130       | 4.97                  | 0     | 25       |      |
| 1,3-Dichlorobenzene       | 4.58             | 0.20              | 5           | 0                        | 91.6 | 70       | 130       | 4.56                  | 0.438 | 25       |      |
| 1,4-Dichlorobenzene       | 4.77             | 0.20              | 5           | 0                        | 95.4 | 70       | 130       | 4.79                  | 0.418 | 25       |      |
| 1,4-Dioxane               | 4.67             | 1.0               | 5           | 0                        | 93.4 | 70       | 130       | 4.12                  | 12.5  | 25       |      |
| 2-Butanone                | 5.12             | 0.50              | 5           | 0                        | 102  | 70       | 130       | 4.98                  | 2.77  | 25       |      |
| 2-Hexanone                | 5.34             | 1.0               | 5           | 0                        | 107  | 70       | 130       | 4.62                  | 14.5  | 25       |      |
| 4-Ethyltoluene            | 4.91             | 0.20              | 5           | 0                        | 98.2 | 70       | 130       | 4.86                  | 1.02  | 25       |      |
| 4-Methyl-2-pentanone      | 5.1              | 1.0               | 5           | 0                        | 102  | 70       | 130       | 4.6                   | 10.3  | 25       |      |
| Acetone                   | 4.98             | 2.0               | 5           | 0                        | 99.6 | 70       | 130       | 5.02                  | 0.800 | 25       | *    |
| Benzene                   | 4.94             | 0.20              | 5           | 0                        | 98.8 | 70       | 130       | 4.9                   | 0.813 | 25       |      |
| Benzyl chloride           | 4.98             | 0.50              | 5           | 0                        | 99.6 | 70       | 130       | 4.57                  | 8.59  | 25       |      |
| Bromodichloromethane      | 4.69             | 0.20              | 5           | 0                        | 93.8 | 70       | 130       | 4.67                  | 0.427 | 25       |      |
| Bromoform                 | 4.67             | 0.50              | 5           | 0                        | 93.4 | 70       | 130       | 4.59                  | 1.73  | 25       |      |
| Bromomethane              | 4.38             | 0.50              | 5           | 0                        | 87.6 | 70       | 130       | 4.42                  | 0.909 | 25       |      |
| Carbon disulfide          | 4.4              | 0.20              | 5           | 0                        | 88   | 70       | 130       | 4.48                  | 1.80  | 25       |      |
| Carbon tetrachloride      | 4.49             | 0.20              | 5           | 0                        | 89.8 | 70       | 130       | 4.51                  | 0.444 | 25       |      |
| Chlorobenzene             | 4.69             | 0.20              | 5           | 0                        | 93.8 | 70       | 130       | 4.65                  | 0.857 | 25       |      |
| Chloroethane              | 5.6              | 0.20              | 5           | 0                        | 112  | 70       | 130       | 5.54                  | 1.08  | 25       |      |
| Chloroform                | 4.79             | 0.20              | 5           | 0                        | 95.8 | 70       | 130       | 4.71                  | 1.68  | 25       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82785**

| Sample ID: LCSD082312-5   | SampType: LCSD   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120823A |       |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15     |             | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2226900        |       |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| Chloromethane             | 4.01             | 0.50              | 5           | 0                        | 80.2 | 70       | 130       | 4.02                  | 0.249 | 25       |      |
| cis-1,2-Dichloroethene    | 4.84             | 0.20              | 5           | 0                        | 96.8 | 70       | 130       | 4.76                  | 1.67  | 25       |      |
| cis-1,3-Dichloropropene   | 5.37             | 0.20              | 5           | 0                        | 107  | 70       | 130       | 5.32                  | 0.935 | 25       |      |
| Cyclohexane               | 5.3              | 0.20              | 5           | 0                        | 106  | 70       | 130       | 5.22                  | 1.52  | 25       |      |
| Dibromochloromethane      | 4.73             | 0.20              | 5           | 0                        | 94.6 | 70       | 130       | 4.73                  | 0     | 25       |      |
| Dichlorodifluoromethane   | 4.23             | 0.20              | 5           | 0                        | 84.6 | 70       | 130       | 4.22                  | 0.237 | 25       |      |
| Ethyl acetate             | 5.33             | 0.20              | 5           | 0                        | 107  | 70       | 130       | 5.21                  | 2.28  | 25       |      |
| Ethylbenzene              | 4.89             | 0.20              | 5           | 0                        | 97.8 | 70       | 130       | 4.87                  | 0.410 | 25       |      |
| Freon-113                 | 4.06             | 0.20              | 5           | 0                        | 81.2 | 70       | 130       | 4.01                  | 1.24  | 25       |      |
| Freon-114                 | 4.04             | 1.0               | 5           | 0                        | 80.8 | 70       | 130       | 3.97                  | 1.75  | 25       |      |
| Heptane                   | 5.96             | 0.20              | 5           | 0                        | 119  | 70       | 130       | 5.95                  | 0.168 | 25       |      |
| Hexachlorobutadiene       | 4.04             | 0.20              | 5           | 0                        | 80.8 | 70       | 130       | 4                     | 0.995 | 25       |      |
| Hexane                    | 5.98             | 0.50              | 5           | 0                        | 120  | 70       | 130       | 5.93                  | 0.840 | 25       |      |
| Isopropyl Alcohol         | 5.63             | 1.0               | 5           | 0                        | 113  | 70       | 130       | 5.42                  | 3.80  | 25       |      |
| m,p-Xylene                | 9.92             | 0.40              | 10          | 0                        | 99.2 | 70       | 130       | 9.84                  | 0.810 | 25       |      |
| Methyl tert-butyl ether   | 5.35             | 0.20              | 5           | 0                        | 107  | 70       | 130       | 5.28                  | 1.32  | 25       |      |
| Methylene chloride        | 4.03             | 2.0               | 5           | 0                        | 80.6 | 70       | 130       | 4.01                  | 0.498 | 25       |      |
| o-Xylene                  | 4.91             | 0.20              | 5           | 0                        | 98.2 | 70       | 130       | 4.9                   | 0.204 | 25       |      |
| Propene                   | 4.84             | 2.0               | 5           | 0                        | 96.8 | 70       | 130       | 4.87                  | 0.618 | 25       |      |
| Styrene                   | 5.39             | 0.20              | 5           | 0                        | 108  | 70       | 130       | 5.33                  | 1.12  | 25       |      |
| Tetrachloroethene         | 4.3              | 0.20              | 5           | 0                        | 86   | 70       | 130       | 4.32                  | 0.464 | 25       |      |
| Tetrahydrofuran           | 5.29             | 0.50              | 5           | 0                        | 106  | 70       | 130       | 5.25                  | 0.759 | 25       |      |
| Toluene                   | 4.97             | 0.20              | 5           | 0                        | 99.4 | 70       | 130       | 4.95                  | 0.403 | 25       |      |
| trans-1,2-Dichloroethene  | 4.79             | 0.20              | 5           | 0                        | 95.8 | 70       | 130       | 4.76                  | 0.628 | 25       |      |
| trans-1,3-Dichloropropene | 4.07             | 0.20              | 5           | 0                        | 81.4 | 70       | 130       | 3.95                  | 2.99  | 25       |      |
| Trichloroethene           | 4.55             | 0.20              | 5           | 0                        | 91   | 70       | 130       | 4.55                  | 0     | 25       |      |
| Trichlorofluoromethane    | 3.63             | 0.20              | 5           | 0                        | 72.6 | 70       | 130       | 3.59                  | 1.11  | 25       |      |
| Vinyl acetate             | 4.45             | 2.0               | 5           | 0                        | 89   | 70       | 130       | 3.94                  | 12.2  | 25       |      |
| Vinyl chloride            | 4.64             | 0.20              | 5           | 0                        | 92.8 | 70       | 130       | 4.64                  | 0     | 25       |      |
| Xylenes, Total            | 14.84            | 0.60              | 15          | 0                        | 98.9 | 70       | 130       | 14.74                 | 0.676 | 25       |      |

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 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82785

| Sample ID: MB082312-5     | SampType: MBLK   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          | Run ID: VOA-5_120823A |             |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15      |              | Analysis Date: 8/23/2012 |      |          | SeqNo: 2227096        |             |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 1.4                |              |                          |      |          |                       |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trichlorobenzene    | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trimethylbenzene    | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dibromoethane         | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| 1,3,5-Trimethylbenzene    | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 1,3-Butadiene             | ND               | 0.40               |              |                          |      |          |                       |             |      |          |      |
| 1,3-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,4-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,4-Dioxane               | ND               | 1.8                |              |                          |      |          |                       |             |      |          |      |
| 2-Butanone                | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 2-Hexanone                | ND               | 4.1                |              |                          |      |          |                       |             |      |          |      |
| 4-Ethyltoluene            | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 4.1                |              |                          |      |          |                       |             |      |          |      |
| Acetone                   | ND               | 4.8                |              |                          |      |          |                       |             |      |          | *    |
| Benzene                   | ND               | 0.60               |              |                          |      |          |                       |             |      |          |      |
| Benzyl chloride           | ND               | 2.6                |              |                          |      |          |                       |             |      |          |      |
| Bromodichloromethane      | ND               | 1.3                |              |                          |      |          |                       |             |      |          |      |
| Bromoform                 | ND               | 5.2                |              |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 1.9                |              |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.60               |              |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 1.3                |              |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.50               |              |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |

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E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82785

| Sample ID: MB082312-5     | SampType: MBLK   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          | Run ID: VOA-5_120823A |             |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15      |              | Analysis Date: 8/23/2012 |      |          | SeqNo: 2227096        |             |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloromethane             | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| cis-1,3-Dichloropropene   | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Cyclohexane               | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 1.7                |              |                          |      |          |                       |             |      |          |      |
| Dichlorodifluoromethane   | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| Ethyl acetate             | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Freon-113                 | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| Freon-114                 | ND               | 7.0                |              |                          |      |          |                       |             |      |          |      |
| Heptane                   | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| Hexachlorobutadiene       | ND               | 2.1                |              |                          |      |          |                       |             |      |          |      |
| Hexane                    | ND               | 1.8                |              |                          |      |          |                       |             |      |          |      |
| Isopropyl Alcohol         | ND               | 2.5                |              |                          |      |          |                       |             |      |          |      |
| m,p-Xylene                | ND               | 1.7                |              |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | ND               | 6.9                |              |                          |      |          |                       |             |      |          |      |
| o-Xylene                  | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Propene                   | ND               | 3.4                |              |                          |      |          |                       |             |      |          |      |
| Styrene                   | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 1.4                |              |                          |      |          |                       |             |      |          |      |
| Tetrahydrofuran           | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| Trichlorofluoromethane    | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| Vinyl acetate             | ND               | 7.0                |              |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.50               |              |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 2.6                |              |                          |      |          |                       |             |      |          |      |

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**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82785**

| Sample ID: LCS082312-5    | SampType: LCS    | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120823A |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15      |              | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2227097        |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 23.24            | 1.1                | 27.28        | 0                        | 85.2 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1,2,2-Tetrachloroethane | 39.69            | 1.4                | 34.34        | 0                        | 116  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1,2-Trichloroethane     | 29.46            | 1.1                | 27.28        | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1-Dichloroethane        | 21.21            | 0.80               | 20.24        | 0                        | 105  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1-Dichloroethene        | 19.98            | 0.80               | 19.82        | 0                        | 101  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2,4-Trichlorobenzene    | 34.66            | 1.5                | 37.11        | 0                        | 93.4 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2,4-Trimethylbenzene    | 23.55            | 1.0                | 24.58        | 0                        | 95.8 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dibromoethane         | 37.19            | 1.5                | 38.42        | 0                        | 96.8 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dichlorobenzene       | 29.94            | 1.2                | 30.06        | 0                        | 99.6 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dichloroethane        | 21.37            | 0.80               | 20.24        | 0                        | 106  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dichloropropane       | 23.8             | 0.90               | 23.11        | 0                        | 103  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,3,5-Trimethylbenzene    | 25.41            | 1.0                | 24.58        | 0                        | 103  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,3-Butadiene             | 10.99            | 0.40               | 11.06        | 0                        | 99.4 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,3-Dichlorobenzene       | 27.42            | 1.2                | 30.06        | 0                        | 91.2 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,4-Dichlorobenzene       | 28.8             | 1.2                | 30.06        | 0                        | 95.8 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,4-Dioxane               | 14.85            | 1.8                | 18.02        | 0                        | 82.4 | 70       | 130       | 0                     | 0    | 0        |      |
| 2-Butanone                | 14.69            | 1.5                | 14.75        | 0                        | 99.6 | 70       | 130       | 0                     | 0    | 0        |      |
| 2-Hexanone                | 18.93            | 4.1                | 20.48        | 0                        | 92.4 | 70       | 130       | 0                     | 0    | 0        |      |
| 4-Ethyltoluene            | 23.89            | 1.0                | 24.58        | 0                        | 97.2 | 70       | 130       | 0                     | 0    | 0        |      |
| 4-Methyl-2-pentanone      | 18.84            | 4.1                | 20.48        | 0                        | 92   | 70       | 130       | 0                     | 0    | 0        |      |
| Acetone                   | 11.92            | 4.8                | 11.88        | 0                        | 100  | 70       | 130       | 0                     | 0    | 0        | *    |
| Benzene                   | 15.65            | 0.60               | 15.97        | 0                        | 98   | 70       | 130       | 0                     | 0    | 0        |      |
| Benzyl chloride           | 23.66            | 2.6                | 25.89        | 0                        | 91.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Bromodichloromethane      | 31.29            | 1.3                | 33.5         | 0                        | 93.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Bromoform                 | 47.45            | 5.2                | 51.68        | 0                        | 91.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Bromomethane              | 17.16            | 1.9                | 19.42        | 0                        | 88.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Carbon disulfide          | 13.95            | 0.60               | 15.57        | 0                        | 89.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Carbon tetrachloride      | 28.37            | 1.3                | 31.46        | 0                        | 90.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Chlorobenzene             | 21.41            | 0.90               | 23.02        | 0                        | 93   | 70       | 130       | 0                     | 0    | 0        |      |
| Chloroethane              | 14.62            | 0.50               | 13.19        | 0                        | 111  | 70       | 130       | 0                     | 0    | 0        |      |
| Chloroform                | 23               | 1.0                | 24.41        | 0                        | 94.2 | 70       | 130       | 0                     | 0    | 0        |      |

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**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82785**

| Sample ID: LCS082312-5    | SampType: LCS    | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120823A |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15      |              | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2227097        |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| Chloromethane             | 8.301            | 1.0                | 10.33        | 0                        | 80.4 | 70       | 130       | 0                     | 0    | 0        |      |
| cis-1,2-Dichloroethene    | 18.87            | 0.80               | 19.82        | 0                        | 95.2 | 70       | 130       | 0                     | 0    | 0        |      |
| cis-1,3-Dichloropropene   | 24.15            | 0.90               | 22.69        | 0                        | 106  | 70       | 130       | 0                     | 0    | 0        |      |
| Cyclohexane               | 17.97            | 0.70               | 17.21        | 0                        | 104  | 70       | 130       | 0                     | 0    | 0        |      |
| Dibromochloromethane      | 40.29            | 1.7                | 42.59        | 0                        | 94.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Dichlorodifluoromethane   | 20.87            | 1.0                | 24.73        | 0                        | 84.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Ethyl acetate             | 18.78            | 0.70               | 18.02        | 0                        | 104  | 70       | 130       | 0                     | 0    | 0        |      |
| Ethylbenzene              | 21.15            | 0.90               | 21.71        | 0                        | 97.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Freon-113                 | 30.73            | 1.5                | 38.32        | 0                        | 80.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Freon-114                 | 27.75            | 7.0                | 34.95        | 0                        | 79.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Heptane                   | 24.38            | 0.80               | 20.49        | 0                        | 119  | 70       | 130       | 0                     | 0    | 0        |      |
| Hexachlorobutadiene       | 42.66            | 2.1                | 53.33        | 0                        | 80   | 70       | 130       | 0                     | 0    | 0        |      |
| Hexane                    | 20.9             | 1.8                | 17.62        | 0                        | 119  | 70       | 130       | 0                     | 0    | 0        |      |
| Isopropyl Alcohol         | 13.32            | 2.5                | 12.29        | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| m,p-Xylene                | 42.72            | 1.7                | 43.42        | 0                        | 98.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Methyl tert-butyl ether   | 19.04            | 0.70               | 18.03        | 0                        | 106  | 70       | 130       | 0                     | 0    | 0        |      |
| Methylene chloride        | 13.93            | 6.9                | 17.37        | 0                        | 80.2 | 70       | 130       | 0                     | 0    | 0        |      |
| o-Xylene                  | 21.28            | 0.90               | 21.71        | 0                        | 98   | 70       | 130       | 0                     | 0    | 0        |      |
| Propene                   | 8.382            | 3.4                | 8.605        | 0                        | 97.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Styrene                   | 22.7             | 0.90               | 21.3         | 0                        | 107  | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrachloroethene         | 29.3             | 1.4                | 33.91        | 0                        | 86.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrahydrofuran           | 15.48            | 1.5                | 14.75        | 0                        | 105  | 70       | 130       | 0                     | 0    | 0        |      |
| Toluene                   | 18.65            | 0.80               | 18.84        | 0                        | 99   | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,2-Dichloroethene  | 18.87            | 0.80               | 19.82        | 0                        | 95.2 | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,3-Dichloropropene | 17.93            | 0.90               | 22.69        | 0                        | 79   | 70       | 130       | 0                     | 0    | 0        |      |
| Trichloroethene           | 24.45            | 1.1                | 26.87        | 0                        | 91   | 70       | 130       | 0                     | 0    | 0        |      |
| Trichlorofluoromethane    | 20.17            | 1.1                | 28.09        | 0                        | 71.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl acetate             | 13.87            | 7.0                | 17.61        | 0                        | 78.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl chloride            | 11.86            | 0.50               | 12.78        | 0                        | 92.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Xylenes, Total            | 64               | 2.6                | 65.13        | 0                        | 98.3 | 70       | 130       | 0                     | 0    | 0        |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82785**

| Sample ID: LCSD082312-5   | SampType: LCSD   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120823A |       |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15      |              | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2227098        |       |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 23.62            | 1.1                | 27.28        | 0                        | 86.6 | 70       | 130       | 23.24                 | 1.63  | 25       |      |
| 1,1,2,2-Tetrachloroethane | 39.83            | 1.4                | 34.34        | 0                        | 116  | 70       | 130       | 39.69                 | 0.345 | 25       |      |
| 1,1,2-Trichloroethane     | 29.74            | 1.1                | 27.28        | 0                        | 109  | 70       | 130       | 29.46                 | 0.922 | 25       |      |
| 1,1-Dichloroethane        | 21.29            | 0.80               | 20.24        | 0                        | 105  | 70       | 130       | 21.21                 | 0.381 | 25       |      |
| 1,1-Dichloroethene        | 20.1             | 0.80               | 19.82        | 0                        | 101  | 70       | 130       | 19.98                 | 0.593 | 25       |      |
| 1,2,4-Trichlorobenzene    | 35.62            | 1.5                | 37.11        | 0                        | 96   | 70       | 130       | 34.66                 | 2.75  | 25       |      |
| 1,2,4-Trimethylbenzene    | 24.04            | 1.0                | 24.58        | 0                        | 97.8 | 70       | 130       | 23.55                 | 2.07  | 25       |      |
| 1,2-Dibromoethane         | 37.57            | 1.5                | 38.42        | 0                        | 97.8 | 70       | 130       | 37.19                 | 1.03  | 25       |      |
| 1,2-Dichlorobenzene       | 29.94            | 1.2                | 30.06        | 0                        | 99.6 | 70       | 130       | 29.94                 | 0     | 25       |      |
| 1,2-Dichloroethane        | 21.41            | 0.80               | 20.24        | 0                        | 106  | 70       | 130       | 21.37                 | 0.189 | 25       |      |
| 1,2-Dichloropropane       | 23.94            | 0.90               | 23.11        | 0                        | 104  | 70       | 130       | 23.8                  | 0.581 | 25       |      |
| 1,3,5-Trimethylbenzene    | 25.86            | 1.0                | 24.58        | 0                        | 105  | 70       | 130       | 25.41                 | 1.73  | 25       |      |
| 1,3-Butadiene             | 10.99            | 0.40               | 11.06        | 0                        | 99.4 | 70       | 130       | 10.99                 | 0     | 25       |      |
| 1,3-Dichlorobenzene       | 27.54            | 1.2                | 30.06        | 0                        | 91.6 | 70       | 130       | 27.42                 | 0.438 | 25       |      |
| 1,4-Dichlorobenzene       | 28.68            | 1.2                | 30.06        | 0                        | 95.4 | 70       | 130       | 28.8                  | 0.418 | 25       |      |
| 1,4-Dioxane               | 16.83            | 1.8                | 18.02        | 0                        | 93.4 | 70       | 130       | 14.85                 | 12.5  | 25       |      |
| 2-Butanone                | 15.1             | 1.5                | 14.75        | 0                        | 102  | 70       | 130       | 14.69                 | 2.77  | 25       |      |
| 2-Hexanone                | 21.88            | 4.1                | 20.48        | 0                        | 107  | 70       | 130       | 18.93                 | 14.5  | 25       |      |
| 4-Ethyltoluene            | 24.14            | 1.0                | 24.58        | 0                        | 98.2 | 70       | 130       | 23.89                 | 1.02  | 25       |      |
| 4-Methyl-2-pentanone      | 20.89            | 4.1                | 20.48        | 0                        | 102  | 70       | 130       | 18.84                 | 10.3  | 25       |      |
| Acetone                   | 11.83            | 4.8                | 11.88        | 0                        | 99.6 | 70       | 130       | 11.92                 | 0.800 | 25       | *    |
| Benzene                   | 15.78            | 0.60               | 15.97        | 0                        | 98.8 | 70       | 130       | 15.65                 | 0.813 | 25       |      |
| Benzyl chloride           | 25.78            | 2.6                | 25.89        | 0                        | 99.6 | 70       | 130       | 23.66                 | 8.59  | 25       |      |
| Bromodichloromethane      | 31.43            | 1.3                | 33.5         | 0                        | 93.8 | 70       | 130       | 31.29                 | 0.427 | 25       |      |
| Bromoform                 | 48.27            | 5.2                | 51.68        | 0                        | 93.4 | 70       | 130       | 47.45                 | 1.73  | 25       |      |
| Bromomethane              | 17.01            | 1.9                | 19.42        | 0                        | 87.6 | 70       | 130       | 17.16                 | 0.909 | 25       |      |
| Carbon disulfide          | 13.7             | 0.60               | 15.57        | 0                        | 88   | 70       | 130       | 13.95                 | 1.80  | 25       |      |
| Carbon tetrachloride      | 28.25            | 1.3                | 31.46        | 0                        | 89.8 | 70       | 130       | 28.37                 | 0.444 | 25       |      |
| Chlorobenzene             | 21.59            | 0.90               | 23.02        | 0                        | 93.8 | 70       | 130       | 21.41                 | 0.857 | 25       |      |
| Chloroethane              | 14.78            | 0.50               | 13.19        | 0                        | 112  | 70       | 130       | 14.62                 | 1.08  | 25       |      |
| Chloroform                | 23.39            | 1.0                | 24.41        | 0                        | 95.8 | 70       | 130       | 23                    | 1.68  | 25       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82785**

| Sample ID: LCSD082312-5   | SampType: LCSD   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120823A |       |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82785 | TestNo: TO-15      |              | Analysis Date: 8/23/2012 |      |          |           | SeqNo: 2227098        |       |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| Chloromethane             | 8.281            | 1.0                | 10.33        | 0                        | 80.2 | 70       | 130       | 8.301                 | 0.249 | 25       |      |
| cis-1,2-Dichloroethene    | 19.19            | 0.80               | 19.82        | 0                        | 96.8 | 70       | 130       | 18.87                 | 1.67  | 25       |      |
| cis-1,3-Dichloropropene   | 24.37            | 0.90               | 22.69        | 0                        | 107  | 70       | 130       | 24.15                 | 0.935 | 25       |      |
| Cyclohexane               | 18.24            | 0.70               | 17.21        | 0                        | 106  | 70       | 130       | 17.97                 | 1.52  | 25       |      |
| Dibromochloromethane      | 40.29            | 1.7                | 42.59        | 0                        | 94.6 | 70       | 130       | 40.29                 | 0     | 25       |      |
| Dichlorodifluoromethane   | 20.92            | 1.0                | 24.73        | 0                        | 84.6 | 70       | 130       | 20.87                 | 0.237 | 25       |      |
| Ethyl acetate             | 19.21            | 0.70               | 18.02        | 0                        | 107  | 70       | 130       | 18.78                 | 2.28  | 25       |      |
| Ethylbenzene              | 21.23            | 0.90               | 21.71        | 0                        | 97.8 | 70       | 130       | 21.15                 | 0.410 | 25       |      |
| Freon-113                 | 31.11            | 1.5                | 38.32        | 0                        | 81.2 | 70       | 130       | 30.73                 | 1.24  | 25       |      |
| Freon-114                 | 28.24            | 7.0                | 34.95        | 0                        | 80.8 | 70       | 130       | 27.75                 | 1.75  | 25       |      |
| Heptane                   | 24.43            | 0.80               | 20.49        | 0                        | 119  | 70       | 130       | 24.38                 | 0.168 | 25       |      |
| Hexachlorobutadiene       | 43.09            | 2.1                | 53.33        | 0                        | 80.8 | 70       | 130       | 42.66                 | 0.995 | 25       |      |
| Hexane                    | 21.08            | 1.8                | 17.62        | 0                        | 120  | 70       | 130       | 20.9                  | 0.840 | 25       |      |
| Isopropyl Alcohol         | 13.84            | 2.5                | 12.29        | 0                        | 113  | 70       | 130       | 13.32                 | 3.80  | 25       |      |
| m,p-Xylene                | 43.07            | 1.7                | 43.42        | 0                        | 99.2 | 70       | 130       | 42.72                 | 0.810 | 25       |      |
| Methyl tert-butyl ether   | 19.29            | 0.70               | 18.03        | 0                        | 107  | 70       | 130       | 19.04                 | 1.32  | 25       |      |
| Methylene chloride        | 14               | 6.9                | 17.37        | 0                        | 80.6 | 70       | 130       | 13.93                 | 0.498 | 25       |      |
| o-Xylene                  | 21.32            | 0.90               | 21.71        | 0                        | 98.2 | 70       | 130       | 21.28                 | 0.204 | 25       |      |
| Propene                   | 8.33             | 3.4                | 8.605        | 0                        | 96.8 | 70       | 130       | 8.382                 | 0.618 | 25       |      |
| Styrene                   | 22.96            | 0.90               | 21.3         | 0                        | 108  | 70       | 130       | 22.7                  | 1.12  | 25       |      |
| Tetrachloroethene         | 29.16            | 1.4                | 33.91        | 0                        | 86   | 70       | 130       | 29.3                  | 0.464 | 25       |      |
| Tetrahydrofuran           | 15.6             | 1.5                | 14.75        | 0                        | 106  | 70       | 130       | 15.48                 | 0.759 | 25       |      |
| Toluene                   | 18.73            | 0.80               | 18.84        | 0                        | 99.4 | 70       | 130       | 18.65                 | 0.403 | 25       |      |
| trans-1,2-Dichloroethene  | 18.99            | 0.80               | 19.82        | 0                        | 95.8 | 70       | 130       | 18.87                 | 0.628 | 25       |      |
| trans-1,3-Dichloropropene | 18.47            | 0.90               | 22.69        | 0                        | 81.4 | 70       | 130       | 17.93                 | 2.99  | 25       |      |
| Trichloroethene           | 24.45            | 1.1                | 26.87        | 0                        | 91   | 70       | 130       | 24.45                 | 0     | 25       |      |
| Trichlorofluoromethane    | 20.39            | 1.1                | 28.09        | 0                        | 72.6 | 70       | 130       | 20.17                 | 1.11  | 25       |      |
| Vinyl acetate             | 15.67            | 7.0                | 17.61        | 0                        | 89   | 70       | 130       | 13.87                 | 12.2  | 25       |      |
| Vinyl chloride            | 11.86            | 0.50               | 12.78        | 0                        | 92.8 | 70       | 130       | 11.86                 | 0     | 25       |      |
| Xylenes, Total            | 64.43            | 2.6                | 65.13        | 0                        | 98.9 | 70       | 130       | 64                    | 0.676 | 25       |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82861

| Sample ID: MB082412-5     | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120824A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15     |             | Analysis Date: 8/24/2012 |      |          | SeqNo: 2229230        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trichlorobenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dibromoethane         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3,5-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Butadiene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dioxane               | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 2-Butanone                | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| 2-Hexanone                | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 4-Ethyltoluene            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| Acetone                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          | *    |
| Benzene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Benzyl chloride           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromodichloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Bromoform                 | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82861

| Sample ID: MB082412-5     | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120824A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15     |             | Analysis Date: 8/24/2012 |      |          | SeqNo: 2229230        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloromethane             | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | 0.03             | 0.20              |             |                          |      |          |                       |             |      |          | J    |
| cis-1,3-Dichloropropene   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Cyclohexane               | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dichlorodifluoromethane   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethyl acetate             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-113                 | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-114                 | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| Heptane                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexachlorobutadiene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexane                    | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Isopropyl Alcohol         | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| m,p-Xylene                | ND               | 0.40              |             |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| o-Xylene                  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Propene                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Styrene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrahydrofuran           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichlorofluoromethane    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Vinyl acetate             | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 0.60              |             |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
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S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080703

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82861

| Sample ID: LCS082412-5    | SampType: LCS    | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120824A |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15     |             | Analysis Date: 8/24/2012 |      |          |           | SeqNo: 2229231        |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 4.36             | 0.20              | 5           | 0                        | 87.2 | 70       | 130       | 0                     | 0    |          |      |
| 1,1,2,2-Tetrachloroethane | 5.93             | 0.20              | 5           | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| 1,1,2-Trichloroethane     | 5.56             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| 1,1-Dichloroethane        | 5.25             | 0.20              | 5           | 0                        | 105  | 70       | 130       | 0                     | 0    |          |      |
| 1,1-Dichloroethene        | 5.02             | 0.20              | 5           | 0                        | 100  | 70       | 130       | 0                     | 0    |          |      |
| 1,2,4-Trichlorobenzene    | 4.55             | 0.20              | 5           | 0                        | 91   | 70       | 130       | 0                     | 0    |          |      |
| 1,2,4-Trimethylbenzene    | 4.8              | 0.20              | 5           | 0                        | 96   | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dibromoethane         | 5.01             | 0.20              | 5           | 0                        | 100  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichlorobenzene       | 4.93             | 0.20              | 5           | 0                        | 98.6 | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloroethane        | 5.51             | 0.20              | 5           | 0                        | 110  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloropropane       | 5.41             | 0.20              | 5           | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| 1,3,5-Trimethylbenzene    | 5.21             | 0.20              | 5           | 0                        | 104  | 70       | 130       | 0                     | 0    |          |      |
| 1,3-Butadiene             | 4.93             | 0.20              | 5           | 0                        | 98.6 | 70       | 130       | 0                     | 0    |          |      |
| 1,3-Dichlorobenzene       | 4.55             | 0.20              | 5           | 0                        | 91   | 70       | 130       | 0                     | 0    |          |      |
| 1,4-Dichlorobenzene       | 4.77             | 0.20              | 5           | 0                        | 95.4 | 70       | 130       | 0                     | 0    |          |      |
| 1,4-Dioxane               | 4.11             | 1.0               | 5           | 0                        | 82.2 | 70       | 130       | 0                     | 0    |          |      |
| 2-Butanone                | 5.06             | 0.50              | 5           | 0                        | 101  | 70       | 130       | 0                     | 0    |          |      |
| 2-Hexanone                | 4.68             | 1.0               | 5           | 0                        | 93.6 | 70       | 130       | 0                     | 0    |          |      |
| 4-Ethyltoluene            | 4.92             | 0.20              | 5           | 0                        | 98.4 | 70       | 130       | 0                     | 0    |          |      |
| 4-Methyl-2-pentanone      | 4.82             | 1.0               | 5           | 0                        | 96.4 | 70       | 130       | 0                     | 0    |          |      |
| Acetone                   | 4.74             | 2.0               | 5           | 0                        | 94.8 | 70       | 130       | 0                     | 0    | *        |      |
| Benzene                   | 5.1              | 0.20              | 5           | 0                        | 102  | 70       | 130       | 0                     | 0    |          |      |
| Benzyl chloride           | 4.09             | 0.50              | 5           | 0                        | 81.8 | 70       | 130       | 0                     | 0    |          |      |
| Bromodichloromethane      | 4.9              | 0.20              | 5           | 0                        | 98   | 70       | 130       | 0                     | 0    |          |      |
| Bromoform                 | 4.59             | 0.50              | 5           | 0                        | 91.8 | 70       | 130       | 0                     | 0    |          |      |
| Bromomethane              | 4.33             | 0.50              | 5           | 0                        | 86.6 | 70       | 130       | 0                     | 0    |          |      |
| Carbon disulfide          | 4.47             | 0.20              | 5           | 0                        | 89.4 | 70       | 130       | 0                     | 0    |          |      |
| Carbon tetrachloride      | 4.78             | 0.20              | 5           | 0                        | 95.6 | 70       | 130       | 0                     | 0    |          |      |
| Chlorobenzene             | 4.74             | 0.20              | 5           | 0                        | 94.8 | 70       | 130       | 0                     | 0    |          |      |
| Chloroethane              | 5.56             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| Chloroform                | 4.94             | 0.20              | 5           | 0                        | 98.8 | 70       | 130       | 0                     | 0    |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82861**

| Sample ID: LCS082412-5    | SampType: LCS    | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120824A |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15     |             | Analysis Date: 8/24/2012 |      |          |           | SeqNo: 2229231        |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| Chloromethane             | 4.11             | 0.50              | 5           | 0                        | 82.2 | 70       | 130       | 0                     | 0    | 0        |      |
| cis-1,2-Dichloroethene    | 4.83             | 0.20              | 5           | 0.03                     | 96   | 70       | 130       | 0                     | 0    | 0        |      |
| cis-1,3-Dichloropropene   | 5.49             | 0.20              | 5           | 0                        | 110  | 70       | 130       | 0                     | 0    | 0        |      |
| Cyclohexane               | 5.43             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 0                     | 0    | 0        |      |
| Dibromochloromethane      | 4.83             | 0.20              | 5           | 0                        | 96.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Dichlorodifluoromethane   | 4.22             | 0.20              | 5           | 0                        | 84.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Ethyl acetate             | 5.52             | 0.20              | 5           | 0                        | 110  | 70       | 130       | 0                     | 0    | 0        |      |
| Ethylbenzene              | 4.96             | 0.20              | 5           | 0                        | 99.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Freon-113                 | 4.05             | 0.20              | 5           | 0                        | 81   | 70       | 130       | 0                     | 0    | 0        |      |
| Freon-114                 | 4.01             | 1.0               | 5           | 0                        | 80.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Heptane                   | 6.33             | 0.20              | 5           | 0                        | 127  | 70       | 130       | 0                     | 0    | 0        |      |
| Hexachlorobutadiene       | 3.88             | 0.20              | 5           | 0                        | 77.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Hexane                    | 6.23             | 0.50              | 5           | 0                        | 125  | 70       | 130       | 0                     | 0    | 0        |      |
| Isopropyl Alcohol         | 5.49             | 1.0               | 5           | 0                        | 110  | 70       | 130       | 0                     | 0    | 0        |      |
| m,p-Xylene                | 9.95             | 0.40              | 10          | 0                        | 99.5 | 70       | 130       | 0                     | 0    | 0        |      |
| Methyl tert-butyl ether   | 5.06             | 0.20              | 5           | 0                        | 101  | 70       | 130       | 0                     | 0    | 0        |      |
| Methylene chloride        | 4.09             | 2.0               | 5           | 0                        | 81.8 | 70       | 130       | 0                     | 0    | 0        |      |
| o-Xylene                  | 4.94             | 0.20              | 5           | 0                        | 98.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Propene                   | 5.05             | 2.0               | 5           | 0                        | 101  | 70       | 130       | 0                     | 0    | 0        |      |
| Styrene                   | 5.39             | 0.20              | 5           | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrachloroethene         | 4.38             | 0.20              | 5           | 0                        | 87.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrahydrofuran           | 5.55             | 0.50              | 5           | 0                        | 111  | 70       | 130       | 0                     | 0    | 0        |      |
| Toluene                   | 5.06             | 0.20              | 5           | 0                        | 101  | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,2-Dichloroethene  | 4.75             | 0.20              | 5           | 0                        | 95   | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,3-Dichloropropene | 4.11             | 0.20              | 5           | 0                        | 82.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Trichloroethene           | 4.67             | 0.20              | 5           | 0                        | 93.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Trichlorofluoromethane    | 3.65             | 0.20              | 5           | 0                        | 73   | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl acetate             | 4.05             | 2.0               | 5           | 0                        | 81   | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl chloride            | 4.63             | 0.20              | 5           | 0                        | 92.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Xylenes, Total            | 14.89            | 0.60              | 15          | 0                        | 99.3 | 70       | 130       | 0                     | 0    | 0        |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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 \* - Non Accredited Parameter

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 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080703

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82861

| Sample ID: LCSD082412-5   | SampType: LCSD   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120824A |       |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15     |             | Analysis Date: 8/24/2012 |      |          |           | SeqNo: 2229232        |       |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 4.35             | 0.20              | 5           | 0                        | 87   | 70       | 130       | 4.36                  | 0.230 | 25       |      |
| 1,1,2,2-Tetrachloroethane | 5.91             | 0.20              | 5           | 0                        | 118  | 70       | 130       | 5.93                  | 0.338 | 25       |      |
| 1,1,2-Trichloroethane     | 5.55             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 5.56                  | 0.180 | 25       |      |
| 1,1-Dichloroethane        | 5.31             | 0.20              | 5           | 0                        | 106  | 70       | 130       | 5.25                  | 1.14  | 25       |      |
| 1,1-Dichloroethene        | 5.09             | 0.20              | 5           | 0                        | 102  | 70       | 130       | 5.02                  | 1.38  | 25       |      |
| 1,2,4-Trichlorobenzene    | 4.61             | 0.20              | 5           | 0                        | 92.2 | 70       | 130       | 4.55                  | 1.31  | 25       |      |
| 1,2,4-Trimethylbenzene    | 4.87             | 0.20              | 5           | 0                        | 97.4 | 70       | 130       | 4.8                   | 1.45  | 25       |      |
| 1,2-Dibromoethane         | 5.01             | 0.20              | 5           | 0                        | 100  | 70       | 130       | 5.01                  | 0     | 25       |      |
| 1,2-Dichlorobenzene       | 4.95             | 0.20              | 5           | 0                        | 99   | 70       | 130       | 4.93                  | 0.405 | 25       |      |
| 1,2-Dichloroethane        | 5.52             | 0.20              | 5           | 0                        | 110  | 70       | 130       | 5.51                  | 0.181 | 25       |      |
| 1,2-Dichloropropane       | 5.41             | 0.20              | 5           | 0                        | 108  | 70       | 130       | 5.41                  | 0     | 25       |      |
| 1,3,5-Trimethylbenzene    | 5.21             | 0.20              | 5           | 0                        | 104  | 70       | 130       | 5.21                  | 0     | 25       |      |
| 1,3-Butadiene             | 4.88             | 0.20              | 5           | 0                        | 97.6 | 70       | 130       | 4.93                  | 1.02  | 25       |      |
| 1,3-Dichlorobenzene       | 4.55             | 0.20              | 5           | 0                        | 91   | 70       | 130       | 4.55                  | 0     | 25       |      |
| 1,4-Dichlorobenzene       | 4.77             | 0.20              | 5           | 0                        | 95.4 | 70       | 130       | 4.77                  | 0     | 25       |      |
| 1,4-Dioxane               | 4.75             | 1.0               | 5           | 0                        | 95   | 70       | 130       | 4.11                  | 14.4  | 25       |      |
| 2-Butanone                | 5.18             | 0.50              | 5           | 0                        | 104  | 70       | 130       | 5.06                  | 2.34  | 25       |      |
| 2-Hexanone                | 5.49             | 1.0               | 5           | 0                        | 110  | 70       | 130       | 4.68                  | 15.9  | 25       |      |
| 4-Ethyltoluene            | 4.94             | 0.20              | 5           | 0                        | 98.8 | 70       | 130       | 4.92                  | 0.406 | 25       |      |
| 4-Methyl-2-pentanone      | 5.34             | 1.0               | 5           | 0                        | 107  | 70       | 130       | 4.82                  | 10.2  | 25       |      |
| Acetone                   | 4.65             | 2.0               | 5           | 0                        | 93   | 70       | 130       | 4.74                  | 1.92  | 25       | *    |
| Benzene                   | 5.08             | 0.20              | 5           | 0                        | 102  | 70       | 130       | 5.1                   | 0.393 | 25       |      |
| Benzyl chloride           | 4.58             | 0.50              | 5           | 0                        | 91.6 | 70       | 130       | 4.09                  | 11.3  | 25       |      |
| Bromodichloromethane      | 4.93             | 0.20              | 5           | 0                        | 98.6 | 70       | 130       | 4.9                   | 0.610 | 25       |      |
| Bromoform                 | 4.66             | 0.50              | 5           | 0                        | 93.2 | 70       | 130       | 4.59                  | 1.51  | 25       |      |
| Bromomethane              | 4.41             | 0.50              | 5           | 0                        | 88.2 | 70       | 130       | 4.33                  | 1.83  | 25       |      |
| Carbon disulfide          | 4.51             | 0.20              | 5           | 0                        | 90.2 | 70       | 130       | 4.47                  | 0.891 | 25       |      |
| Carbon tetrachloride      | 4.88             | 0.20              | 5           | 0                        | 97.6 | 70       | 130       | 4.78                  | 2.07  | 25       |      |
| Chlorobenzene             | 4.74             | 0.20              | 5           | 0                        | 94.8 | 70       | 130       | 4.74                  | 0     | 25       |      |
| Chloroethane              | 5.66             | 0.20              | 5           | 0                        | 113  | 70       | 130       | 5.56                  | 1.78  | 25       |      |
| Chloroform                | 5                | 0.20              | 5           | 0                        | 100  | 70       | 130       | 4.94                  | 1.21  | 25       |      |

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 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080703

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82861

| Sample ID: LCSD082412-5   | SampType: LCSD   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120824A |        |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|--------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15     |             | Analysis Date: 8/24/2012 |      |          |           | SeqNo: 2229232        |        |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD   | RPDLimit | Qual |
| Chloromethane             | 4.16             | 0.50              | 5           | 0                        | 83.2 | 70       | 130       | 4.11                  | 1.21   | 25       |      |
| cis-1,2-Dichloroethene    | 4.98             | 0.20              | 5           | 0.03                     | 99   | 70       | 130       | 4.83                  | 3.06   | 25       |      |
| cis-1,3-Dichloropropene   | 5.51             | 0.20              | 5           | 0                        | 110  | 70       | 130       | 5.49                  | 0.364  | 25       |      |
| Cyclohexane               | 5.46             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 5.43                  | 0.551  | 25       |      |
| Dibromochloromethane      | 4.88             | 0.20              | 5           | 0                        | 97.6 | 70       | 130       | 4.83                  | 1.03   | 25       |      |
| Dichlorodifluoromethane   | 4.21             | 0.20              | 5           | 0                        | 84.2 | 70       | 130       | 4.22                  | 0.237  | 25       |      |
| Ethyl acetate             | 5.47             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 5.52                  | 0.910  | 25       |      |
| Ethylbenzene              | 4.9              | 0.20              | 5           | 0                        | 98   | 70       | 130       | 4.96                  | 1.22   | 25       |      |
| Freon-113                 | 4.1              | 0.20              | 5           | 0                        | 82   | 70       | 130       | 4.05                  | 1.23   | 25       |      |
| Freon-114                 | 4.15             | 1.0               | 5           | 0                        | 83   | 70       | 130       | 4.01                  | 3.43   | 25       |      |
| Heptane                   | 6.23             | 0.20              | 5           | 0                        | 125  | 70       | 130       | 6.33                  | 1.59   | 25       |      |
| Hexachlorobutadiene       | 3.9              | 0.20              | 5           | 0                        | 78   | 70       | 130       | 3.88                  | 0.514  | 25       |      |
| Hexane                    | 6.21             | 0.50              | 5           | 0                        | 124  | 70       | 130       | 6.23                  | 0.322  | 25       |      |
| Isopropyl Alcohol         | 5.67             | 1.0               | 5           | 0                        | 113  | 70       | 130       | 5.49                  | 3.23   | 25       |      |
| m,p-Xylene                | 9.94             | 0.40              | 10          | 0                        | 99.4 | 70       | 130       | 9.95                  | 0.101  | 25       |      |
| Methyl tert-butyl ether   | 5.14             | 0.20              | 5           | 0                        | 103  | 70       | 130       | 5.06                  | 1.57   | 25       |      |
| Methylene chloride        | 4.1              | 2.0               | 5           | 0                        | 82   | 70       | 130       | 4.09                  | 0.244  | 25       |      |
| o-Xylene                  | 4.96             | 0.20              | 5           | 0                        | 99.2 | 70       | 130       | 4.94                  | 0.404  | 25       |      |
| Propene                   | 5                | 2.0               | 5           | 0                        | 100  | 70       | 130       | 5.05                  | 0.995  | 25       |      |
| Styrene                   | 5.42             | 0.20              | 5           | 0                        | 108  | 70       | 130       | 5.39                  | 0.555  | 25       |      |
| Tetrachloroethene         | 4.36             | 0.20              | 5           | 0                        | 87.2 | 70       | 130       | 4.38                  | 0.458  | 25       |      |
| Tetrahydrofuran           | 5.61             | 0.50              | 5           | 0                        | 112  | 70       | 130       | 5.55                  | 1.08   | 25       |      |
| Toluene                   | 5.04             | 0.20              | 5           | 0                        | 101  | 70       | 130       | 5.06                  | 0.396  | 25       |      |
| trans-1,2-Dichloroethene  | 4.83             | 0.20              | 5           | 0                        | 96.6 | 70       | 130       | 4.75                  | 1.67   | 25       |      |
| trans-1,3-Dichloropropene | 4.18             | 0.20              | 5           | 0                        | 83.6 | 70       | 130       | 4.11                  | 1.69   | 25       |      |
| Trichloroethene           | 4.92             | 0.20              | 5           | 0                        | 98.4 | 70       | 130       | 4.67                  | 5.21   | 25       |      |
| Trichlorofluoromethane    | 3.76             | 0.20              | 5           | 0                        | 75.2 | 70       | 130       | 3.65                  | 2.97   | 25       |      |
| Vinyl acetate             | 4.52             | 2.0               | 5           | 0                        | 90.4 | 70       | 130       | 4.05                  | 11.0   | 25       |      |
| Vinyl chloride            | 4.66             | 0.20              | 5           | 0                        | 93.2 | 70       | 130       | 4.63                  | 0.646  | 25       |      |
| Xylenes, Total            | 14.9             | 0.60              | 15          | 0                        | 99.3 | 70       | 130       | 14.89                 | 0.0671 | 25       |      |

**Qualifiers:**

ND - Not Detected at the Reporting Limit

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B - Analyte detected in the associated Method Blank

E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82861

| Sample ID: MB082412-5     | SampType: MBLK   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          | Run ID: VOA-5_120824A |             |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15      |              | Analysis Date: 8/24/2012 |      |          | SeqNo: 2317533        |             |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 1.4                |              |                          |      |          |                       |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trichlorobenzene    | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trimethylbenzene    | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dibromoethane         | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| 1,3,5-Trimethylbenzene    | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 1,3-Butadiene             | ND               | 0.40               |              |                          |      |          |                       |             |      |          |      |
| 1,3-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,4-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,4-Dioxane               | ND               | 1.8                |              |                          |      |          |                       |             |      |          |      |
| 2-Butanone                | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 2-Hexanone                | ND               | 4.1                |              |                          |      |          |                       |             |      |          |      |
| 4-Ethyltoluene            | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 4.1                |              |                          |      |          |                       |             |      |          |      |
| Acetone                   | ND               | 4.8                |              |                          |      |          |                       |             |      |          | *    |
| Benzene                   | ND               | 0.60               |              |                          |      |          |                       |             |      |          |      |
| Benzyl chloride           | ND               | 2.6                |              |                          |      |          |                       |             |      |          |      |
| Bromodichloromethane      | ND               | 1.3                |              |                          |      |          |                       |             |      |          |      |
| Bromoform                 | ND               | 5.2                |              |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 1.9                |              |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.60               |              |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 1.3                |              |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.50               |              |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82861

| Sample ID: MB082412-5     | SampType: MBLK   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          | Run ID: VOA-5_120824A |             |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15      |              | Analysis Date: 8/24/2012 |      |          | SeqNo: 2317533        |             |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloromethane             | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | 0.1189           | 0.80               |              |                          |      |          |                       |             |      |          | J    |
| cis-1,3-Dichloropropene   | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Cyclohexane               | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 1.7                |              |                          |      |          |                       |             |      |          |      |
| Dichlorodifluoromethane   | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| Ethyl acetate             | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Freon-113                 | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| Freon-114                 | ND               | 7.0                |              |                          |      |          |                       |             |      |          |      |
| Heptane                   | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| Hexachlorobutadiene       | ND               | 2.1                |              |                          |      |          |                       |             |      |          |      |
| Hexane                    | ND               | 1.8                |              |                          |      |          |                       |             |      |          |      |
| Isopropyl Alcohol         | ND               | 2.5                |              |                          |      |          |                       |             |      |          |      |
| m,p-Xylene                | ND               | 1.7                |              |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | ND               | 6.9                |              |                          |      |          |                       |             |      |          |      |
| o-Xylene                  | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Propene                   | ND               | 3.4                |              |                          |      |          |                       |             |      |          |      |
| Styrene                   | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 1.4                |              |                          |      |          |                       |             |      |          |      |
| Tetrahydrofuran           | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| Trichlorofluoromethane    | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| Vinyl acetate             | ND               | 7.0                |              |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.50               |              |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 2.6                |              |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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S - Spike Recovery outside accepted recovery limits  
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H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82861**

| Sample ID: LCS082412-5    | SampType: LCS    | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120824A |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15      |              | Analysis Date: 8/24/2012 |      |          |           | SeqNo: 2317534        |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 23.79            | 1.1                | 27.28        | 0                        | 87.2 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1,2,2-Tetrachloroethane | 40.72            | 1.4                | 34.34        | 0                        | 119  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1,2-Trichloroethane     | 30.34            | 1.1                | 27.28        | 0                        | 111  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1-Dichloroethane        | 21.25            | 0.80               | 20.24        | 0                        | 105  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,1-Dichloroethene        | 19.9             | 0.80               | 19.82        | 0                        | 100  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2,4-Trichlorobenzene    | 33.77            | 1.5                | 37.11        | 0                        | 91   | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2,4-Trimethylbenzene    | 23.6             | 1.0                | 24.58        | 0                        | 96   | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dibromoethane         | 38.49            | 1.5                | 38.42        | 0                        | 100  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dichlorobenzene       | 29.64            | 1.2                | 30.06        | 0                        | 98.6 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dichloroethane        | 22.3             | 0.80               | 20.24        | 0                        | 110  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,2-Dichloropropane       | 25               | 0.90               | 23.11        | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,3,5-Trimethylbenzene    | 25.61            | 1.0                | 24.58        | 0                        | 104  | 70       | 130       | 0                     | 0    | 0        |      |
| 1,3-Butadiene             | 10.91            | 0.40               | 11.06        | 0                        | 98.6 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,3-Dichlorobenzene       | 27.36            | 1.2                | 30.06        | 0                        | 91   | 70       | 130       | 0                     | 0    | 0        |      |
| 1,4-Dichlorobenzene       | 28.68            | 1.2                | 30.06        | 0                        | 95.4 | 70       | 130       | 0                     | 0    | 0        |      |
| 1,4-Dioxane               | 14.81            | 1.8                | 18.02        | 0                        | 82.2 | 70       | 130       | 0                     | 0    | 0        |      |
| 2-Butanone                | 14.92            | 1.5                | 14.75        | 0                        | 101  | 70       | 130       | 0                     | 0    | 0        |      |
| 2-Hexanone                | 19.17            | 4.1                | 20.48        | 0                        | 93.6 | 70       | 130       | 0                     | 0    | 0        |      |
| 4-Ethyltoluene            | 24.19            | 1.0                | 24.58        | 0                        | 98.4 | 70       | 130       | 0                     | 0    | 0        |      |
| 4-Methyl-2-pentanone      | 19.75            | 4.1                | 20.48        | 0                        | 96.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Acetone                   | 11.26            | 4.8                | 11.88        | 0                        | 94.8 | 70       | 130       | 0                     | 0    | 0        | *    |
| Benzene                   | 16.29            | 0.60               | 15.97        | 0                        | 102  | 70       | 130       | 0                     | 0    | 0        |      |
| Benzyl chloride           | 21.17            | 2.6                | 25.89        | 0                        | 81.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Bromodichloromethane      | 32.83            | 1.3                | 33.5         | 0                        | 98   | 70       | 130       | 0                     | 0    | 0        |      |
| Bromoform                 | 47.45            | 5.2                | 51.68        | 0                        | 91.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Bromomethane              | 16.81            | 1.9                | 19.42        | 0                        | 86.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Carbon disulfide          | 13.92            | 0.60               | 15.57        | 0                        | 89.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Carbon tetrachloride      | 30.07            | 1.3                | 31.46        | 0                        | 95.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Chlorobenzene             | 21.82            | 0.90               | 23.02        | 0                        | 94.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Chloroethane              | 14.67            | 0.50               | 13.19        | 0                        | 111  | 70       | 130       | 0                     | 0    | 0        |      |
| Chloroform                | 24.12            | 1.0                | 24.41        | 0                        | 98.8 | 70       | 130       | 0                     | 0    | 0        |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82861**

| Sample ID: LCS082412-5    | SampType: LCS    | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120824A |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15      |              | Analysis Date: 8/24/2012 |      |          |           | SeqNo: 2317534        |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| Chloromethane             | 8.487            | 1.0                | 10.33        | 0                        | 82.2 | 70       | 130       | 0                     | 0    | 0        |      |
| cis-1,2-Dichloroethene    | 19.15            | 0.80               | 19.82        | 0.1189                   | 96   | 70       | 130       | 0                     | 0    | 0        |      |
| cis-1,3-Dichloropropene   | 24.92            | 0.90               | 22.69        | 0                        | 110  | 70       | 130       | 0                     | 0    | 0        |      |
| Cyclohexane               | 18.69            | 0.70               | 17.21        | 0                        | 109  | 70       | 130       | 0                     | 0    | 0        |      |
| Dibromochloromethane      | 41.14            | 1.7                | 42.59        | 0                        | 96.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Dichlorodifluoromethane   | 20.87            | 1.0                | 24.73        | 0                        | 84.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Ethyl acetate             | 19.89            | 0.70               | 18.02        | 0                        | 110  | 70       | 130       | 0                     | 0    | 0        |      |
| Ethylbenzene              | 21.54            | 0.90               | 21.71        | 0                        | 99.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Freon-113                 | 31.04            | 1.5                | 38.32        | 0                        | 81   | 70       | 130       | 0                     | 0    | 0        |      |
| Freon-114                 | 28.03            | 7.0                | 34.95        | 0                        | 80.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Heptane                   | 25.94            | 0.80               | 20.49        | 0                        | 127  | 70       | 130       | 0                     | 0    | 0        |      |
| Hexachlorobutadiene       | 41.38            | 2.1                | 53.33        | 0                        | 77.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Hexane                    | 21.96            | 1.8                | 17.62        | 0                        | 125  | 70       | 130       | 0                     | 0    | 0        |      |
| Isopropyl Alcohol         | 13.49            | 2.5                | 12.29        | 0                        | 110  | 70       | 130       | 0                     | 0    | 0        |      |
| m,p-Xylene                | 43.2             | 1.7                | 43.42        | 0                        | 99.5 | 70       | 130       | 0                     | 0    | 0        |      |
| Methyl tert-butyl ether   | 18.24            | 0.70               | 18.03        | 0                        | 101  | 70       | 130       | 0                     | 0    | 0        |      |
| Methylene chloride        | 14.21            | 6.9                | 17.37        | 0                        | 81.8 | 70       | 130       | 0                     | 0    | 0        |      |
| o-Xylene                  | 21.45            | 0.90               | 21.71        | 0                        | 98.8 | 70       | 130       | 0                     | 0    | 0        |      |
| Propene                   | 8.691            | 3.4                | 8.605        | 0                        | 101  | 70       | 130       | 0                     | 0    | 0        |      |
| Styrene                   | 22.96            | 0.90               | 21.3         | 0                        | 108  | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrachloroethene         | 29.71            | 1.4                | 33.91        | 0                        | 87.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Tetrahydrofuran           | 16.37            | 1.5                | 14.75        | 0                        | 111  | 70       | 130       | 0                     | 0    | 0        |      |
| Toluene                   | 19.07            | 0.80               | 18.84        | 0                        | 101  | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,2-Dichloroethene  | 18.83            | 0.80               | 19.82        | 0                        | 95   | 70       | 130       | 0                     | 0    | 0        |      |
| trans-1,3-Dichloropropene | 18.65            | 0.90               | 22.69        | 0                        | 82.2 | 70       | 130       | 0                     | 0    | 0        |      |
| Trichloroethene           | 25.1             | 1.1                | 26.87        | 0                        | 93.4 | 70       | 130       | 0                     | 0    | 0        |      |
| Trichlorofluoromethane    | 20.51            | 1.1                | 28.09        | 0                        | 73   | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl acetate             | 14.26            | 7.0                | 17.61        | 0                        | 81   | 70       | 130       | 0                     | 0    | 0        |      |
| Vinyl chloride            | 11.84            | 0.50               | 12.78        | 0                        | 92.6 | 70       | 130       | 0                     | 0    | 0        |      |
| Xylenes, Total            | 64.65            | 2.6                | 65.13        | 0                        | 99.3 | 70       | 130       | 0                     | 0    | 0        |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82861**

| Sample ID: LCSD082412-5   | SampType: LCSD   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120824A |       |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15      |              | Analysis Date: 8/24/2012 |      |          |           | SeqNo: 2317535        |       |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 23.73            | 1.1                | 27.28        | 0                        | 87   | 70       | 130       | 23.79                 | 0.230 | 25       |      |
| 1,1,2,2-Tetrachloroethane | 40.58            | 1.4                | 34.34        | 0                        | 118  | 70       | 130       | 40.72                 | 0.338 | 25       |      |
| 1,1,2-Trichloroethane     | 30.28            | 1.1                | 27.28        | 0                        | 111  | 70       | 130       | 30.34                 | 0.180 | 25       |      |
| 1,1-Dichloroethane        | 21.49            | 0.80               | 20.24        | 0                        | 106  | 70       | 130       | 21.25                 | 1.14  | 25       |      |
| 1,1-Dichloroethene        | 20.18            | 0.80               | 19.82        | 0                        | 102  | 70       | 130       | 19.9                  | 1.38  | 25       |      |
| 1,2,4-Trichlorobenzene    | 34.21            | 1.5                | 37.11        | 0                        | 92.2 | 70       | 130       | 33.77                 | 1.31  | 25       |      |
| 1,2,4-Trimethylbenzene    | 23.94            | 1.0                | 24.58        | 0                        | 97.4 | 70       | 130       | 23.6                  | 1.45  | 25       |      |
| 1,2-Dibromoethane         | 38.49            | 1.5                | 38.42        | 0                        | 100  | 70       | 130       | 38.49                 | 0     | 25       |      |
| 1,2-Dichlorobenzene       | 29.76            | 1.2                | 30.06        | 0                        | 99   | 70       | 130       | 29.64                 | 0.405 | 25       |      |
| 1,2-Dichloroethane        | 22.34            | 0.80               | 20.24        | 0                        | 110  | 70       | 130       | 22.3                  | 0.181 | 25       |      |
| 1,2-Dichloropropane       | 25               | 0.90               | 23.11        | 0                        | 108  | 70       | 130       | 25                    | 0     | 25       |      |
| 1,3,5-Trimethylbenzene    | 25.61            | 1.0                | 24.58        | 0                        | 104  | 70       | 130       | 25.61                 | 0     | 25       |      |
| 1,3-Butadiene             | 10.8             | 0.40               | 11.06        | 0                        | 97.6 | 70       | 130       | 10.91                 | 1.02  | 25       |      |
| 1,3-Dichlorobenzene       | 27.36            | 1.2                | 30.06        | 0                        | 91   | 70       | 130       | 27.36                 | 0     | 25       |      |
| 1,4-Dichlorobenzene       | 28.68            | 1.2                | 30.06        | 0                        | 95.4 | 70       | 130       | 28.68                 | 0     | 25       |      |
| 1,4-Dioxane               | 17.12            | 1.8                | 18.02        | 0                        | 95   | 70       | 130       | 14.81                 | 14.4  | 25       |      |
| 2-Butanone                | 15.28            | 1.5                | 14.75        | 0                        | 104  | 70       | 130       | 14.92                 | 2.34  | 25       |      |
| 2-Hexanone                | 22.49            | 4.1                | 20.48        | 0                        | 110  | 70       | 130       | 19.17                 | 15.9  | 25       |      |
| 4-Ethyltoluene            | 24.28            | 1.0                | 24.58        | 0                        | 98.8 | 70       | 130       | 24.19                 | 0.406 | 25       |      |
| 4-Methyl-2-pentanone      | 21.88            | 4.1                | 20.48        | 0                        | 107  | 70       | 130       | 19.75                 | 10.2  | 25       |      |
| Acetone                   | 11.05            | 4.8                | 11.88        | 0                        | 93   | 70       | 130       | 11.26                 | 1.92  | 25       | *    |
| Benzene                   | 16.23            | 0.60               | 15.97        | 0                        | 102  | 70       | 130       | 16.29                 | 0.393 | 25       |      |
| Benzyl chloride           | 23.71            | 2.6                | 25.89        | 0                        | 91.6 | 70       | 130       | 21.17                 | 11.3  | 25       |      |
| Bromodichloromethane      | 33.03            | 1.3                | 33.5         | 0                        | 98.6 | 70       | 130       | 32.83                 | 0.610 | 25       |      |
| Bromoform                 | 48.17            | 5.2                | 51.68        | 0                        | 93.2 | 70       | 130       | 47.45                 | 1.51  | 25       |      |
| Bromomethane              | 17.12            | 1.9                | 19.42        | 0                        | 88.2 | 70       | 130       | 16.81                 | 1.83  | 25       |      |
| Carbon disulfide          | 14.04            | 0.60               | 15.57        | 0                        | 90.2 | 70       | 130       | 13.92                 | 0.891 | 25       |      |
| Carbon tetrachloride      | 30.7             | 1.3                | 31.46        | 0                        | 97.6 | 70       | 130       | 30.07                 | 2.07  | 25       |      |
| Chlorobenzene             | 21.82            | 0.90               | 23.02        | 0                        | 94.8 | 70       | 130       | 21.82                 | 0     | 25       |      |
| Chloroethane              | 14.93            | 0.50               | 13.19        | 0                        | 113  | 70       | 130       | 14.67                 | 1.78  | 25       |      |
| Chloroform                | 24.41            | 1.0                | 24.41        | 0                        | 100  | 70       | 130       | 24.12                 | 1.21  | 25       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82861**

| Sample ID: LCSD082412-5   | SampType: LCSD   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120824A |        |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|--------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82861 | TestNo: TO-15      |              | Analysis Date: 8/24/2012 |      |          |           | SeqNo: 2317535        |        |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD   | RPDLimit | Qual |
| Chloromethane             | 8.591            | 1.0                | 10.33        | 0                        | 83.2 | 70       | 130       | 8.487                 | 1.21   | 25       |      |
| cis-1,2-Dichloroethene    | 19.74            | 0.80               | 19.82        | 0.1189                   | 99   | 70       | 130       | 19.15                 | 3.06   | 25       |      |
| cis-1,3-Dichloropropene   | 25.01            | 0.90               | 22.69        | 0                        | 110  | 70       | 130       | 24.92                 | 0.364  | 25       |      |
| Cyclohexane               | 18.79            | 0.70               | 17.21        | 0                        | 109  | 70       | 130       | 18.69                 | 0.551  | 25       |      |
| Dibromochloromethane      | 41.57            | 1.7                | 42.59        | 0                        | 97.6 | 70       | 130       | 41.14                 | 1.03   | 25       |      |
| Dichlorodifluoromethane   | 20.82            | 1.0                | 24.73        | 0                        | 84.2 | 70       | 130       | 20.87                 | 0.237  | 25       |      |
| Ethyl acetate             | 19.71            | 0.70               | 18.02        | 0                        | 109  | 70       | 130       | 19.89                 | 0.910  | 25       |      |
| Ethylbenzene              | 21.28            | 0.90               | 21.71        | 0                        | 98   | 70       | 130       | 21.54                 | 1.22   | 25       |      |
| Freon-113                 | 31.42            | 1.5                | 38.32        | 0                        | 82   | 70       | 130       | 31.04                 | 1.23   | 25       |      |
| Freon-114                 | 29.01            | 7.0                | 34.95        | 0                        | 83   | 70       | 130       | 28.03                 | 3.43   | 25       |      |
| Heptane                   | 25.53            | 0.80               | 20.49        | 0                        | 125  | 70       | 130       | 25.94                 | 1.59   | 25       |      |
| Hexachlorobutadiene       | 41.59            | 2.1                | 53.33        | 0                        | 78   | 70       | 130       | 41.38                 | 0.514  | 25       |      |
| Hexane                    | 21.89            | 1.8                | 17.62        | 0                        | 124  | 70       | 130       | 21.96                 | 0.322  | 25       |      |
| Isopropyl Alcohol         | 13.94            | 2.5                | 12.29        | 0                        | 113  | 70       | 130       | 13.49                 | 3.23   | 25       |      |
| m,p-Xylene                | 43.16            | 1.7                | 43.42        | 0                        | 99.4 | 70       | 130       | 43.2                  | 0.101  | 25       |      |
| Methyl tert-butyl ether   | 18.53            | 0.70               | 18.03        | 0                        | 103  | 70       | 130       | 18.24                 | 1.57   | 25       |      |
| Methylene chloride        | 14.24            | 6.9                | 17.37        | 0                        | 82   | 70       | 130       | 14.21                 | 0.244  | 25       |      |
| o-Xylene                  | 21.54            | 0.90               | 21.71        | 0                        | 99.2 | 70       | 130       | 21.45                 | 0.404  | 25       |      |
| Propene                   | 8.605            | 3.4                | 8.605        | 0                        | 100  | 70       | 130       | 8.691                 | 0.995  | 25       |      |
| Styrene                   | 23.09            | 0.90               | 21.3         | 0                        | 108  | 70       | 130       | 22.96                 | 0.555  | 25       |      |
| Tetrachloroethene         | 29.57            | 1.4                | 33.91        | 0                        | 87.2 | 70       | 130       | 29.71                 | 0.458  | 25       |      |
| Tetrahydrofuran           | 16.55            | 1.5                | 14.75        | 0                        | 112  | 70       | 130       | 16.37                 | 1.08   | 25       |      |
| Toluene                   | 18.99            | 0.80               | 18.84        | 0                        | 101  | 70       | 130       | 19.07                 | 0.396  | 25       |      |
| trans-1,2-Dichloroethene  | 19.15            | 0.80               | 19.82        | 0                        | 96.6 | 70       | 130       | 18.83                 | 1.67   | 25       |      |
| trans-1,3-Dichloropropene | 18.97            | 0.90               | 22.69        | 0                        | 83.6 | 70       | 130       | 18.65                 | 1.69   | 25       |      |
| Trichloroethene           | 26.44            | 1.1                | 26.87        | 0                        | 98.4 | 70       | 130       | 25.1                  | 5.21   | 25       |      |
| Trichlorofluoromethane    | 21.13            | 1.1                | 28.09        | 0                        | 75.2 | 70       | 130       | 20.51                 | 2.97   | 25       |      |
| Vinyl acetate             | 15.92            | 7.0                | 17.61        | 0                        | 90.4 | 70       | 130       | 14.26                 | 11.0   | 25       |      |
| Vinyl chloride            | 11.91            | 0.50               | 12.78        | 0                        | 93.2 | 70       | 130       | 11.84                 | 0.646  | 25       |      |
| Xylenes, Total            | 64.69            | 2.6                | 65.13        | 0                        | 99.3 | 70       | 130       | 64.65                 | 0.0671 | 25       |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82862

| Sample ID: MB082712-5     | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120827A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15     |             | Analysis Date: 8/27/2012 |      |          | SeqNo: 2229236        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trichlorobenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dibromoethane         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3,5-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Butadiene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dioxane               | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 2-Butanone                | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| 2-Hexanone                | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 4-Ethyltoluene            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| Acetone                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          | *    |
| Benzene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Benzyl chloride           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromodichloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Bromoform                 | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82862

| Sample ID: MB082712-5     | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120827A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15     |             | Analysis Date: 8/27/2012 |      |          | SeqNo: 2229236        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloromethane             | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | 0.05             | 0.20              |             |                          |      |          |                       |             |      |          | J    |
| cis-1,3-Dichloropropene   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Cyclohexane               | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dichlorodifluoromethane   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethyl acetate             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-113                 | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-114                 | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| Heptane                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexachlorobutadiene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexane                    | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Isopropyl Alcohol         | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| m,p-Xylene                | ND               | 0.40              |             |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| o-Xylene                  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Propene                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Styrene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrahydrofuran           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichlorofluoromethane    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Vinyl acetate             | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 0.60              |             |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82862

| Sample ID: C082312        | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120827A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15     |             | Analysis Date: 8/27/2012 |      |          | SeqNo: 2229866        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trichlorobenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dibromoethane         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3,5-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Butadiene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dioxane               | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 2-Butanone                | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| 2-Hexanone                | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 4-Ethyltoluene            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| Acetone                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          | *    |
| Benzene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Benzyl chloride           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromodichloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Bromoform                 | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82862

| Sample ID: C082312        | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               | Run ID: VOA-5_120827A |          |           |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15     |             | Analysis Date: 8/27/2012 | SeqNo: 2229866        |          |           |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC                  | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloromethane             | ND               | 0.50              |             |                          |                       |          |           |             |      |          |      |
| cis-1,2-Dichloroethene    | 0.05             | 0.20              |             |                          |                       |          |           |             |      |          | J    |
| cis-1,3-Dichloropropene   | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Cyclohexane               | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Dibromochloromethane      | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Dichlorodifluoromethane   | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Ethyl acetate             | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Ethylbenzene              | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Freon-113                 | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Freon-114                 | ND               | 1.0               |             |                          |                       |          |           |             |      |          |      |
| Heptane                   | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Hexachlorobutadiene       | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Hexane                    | ND               | 0.50              |             |                          |                       |          |           |             |      |          |      |
| Isopropyl Alcohol         | ND               | 1.0               |             |                          |                       |          |           |             |      |          |      |
| m,p-Xylene                | ND               | 0.40              |             |                          |                       |          |           |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Methylene chloride        | ND               | 2.0               |             |                          |                       |          |           |             |      |          |      |
| o-Xylene                  | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Propene                   | ND               | 2.0               |             |                          |                       |          |           |             |      |          |      |
| Styrene                   | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Tetrachloroethene         | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Tetrahydrofuran           | ND               | 0.50              |             |                          |                       |          |           |             |      |          |      |
| Toluene                   | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Trichloroethene           | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Trichlorofluoromethane    | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Vinyl acetate             | ND               | 2.0               |             |                          |                       |          |           |             |      |          |      |
| Vinyl chloride            | ND               | 0.20              |             |                          |                       |          |           |             |      |          |      |
| Xylenes, Total            | ND               | 0.60              |             |                          |                       |          |           |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82862

| Sample ID: C082412        | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120827A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15     |             | Analysis Date: 8/27/2012 |      |          | SeqNo: 2229867        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trichlorobenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dibromoethane         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3,5-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Butadiene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dioxane               | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 2-Butanone                | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| 2-Hexanone                | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 4-Ethyltoluene            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| Acetone                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          | *    |
| Benzene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Benzyl chloride           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromodichloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Bromoform                 | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
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H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82862

| Sample ID: C082412        | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120827A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15     |             | Analysis Date: 8/27/2012 |      |          | SeqNo: 2229867        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloromethane             | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | 0.05             | 0.20              |             |                          |      |          |                       |             |      |          | J    |
| cis-1,3-Dichloropropene   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Cyclohexane               | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dichlorodifluoromethane   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethyl acetate             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-113                 | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-114                 | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| Heptane                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexachlorobutadiene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexane                    | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Isopropyl Alcohol         | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| m,p-Xylene                | ND               | 0.40              |             |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| o-Xylene                  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Propene                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Styrene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrahydrofuran           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichlorofluoromethane    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Vinyl acetate             | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 0.60              |             |                          |      |          |                       |             |      |          |      |

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**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080703

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82862

| Sample ID: LCS082712-5    | SampType: LCS    | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120827A |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15     |             | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2229237        |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 4.94             | 0.20              | 5           | 0                        | 98.8 | 70       | 130       | 0                     | 0    |          |      |
| 1,1,2,2-Tetrachloroethane | 6.96             | 0.20              | 5           | 0                        | 139  | 70       | 130       | 0                     | 0    |          | S    |
| 1,1,2-Trichloroethane     | 6.33             | 0.20              | 5           | 0                        | 127  | 70       | 130       | 0                     | 0    |          |      |
| 1,1-Dichloroethane        | 5.97             | 0.20              | 5           | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| 1,1-Dichloroethene        | 5.99             | 0.20              | 5           | 0                        | 120  | 70       | 130       | 0                     | 0    |          |      |
| 1,2,4-Trichlorobenzene    | 5.45             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 0                     | 0    |          |      |
| 1,2,4-Trimethylbenzene    | 5.6              | 0.20              | 5           | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dibromoethane         | 5.73             | 0.20              | 5           | 0                        | 115  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichlorobenzene       | 5.71             | 0.20              | 5           | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloroethane        | 6.45             | 0.20              | 5           | 0                        | 129  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloropropane       | 6.08             | 0.20              | 5           | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| 1,3,5-Trimethylbenzene    | 6.05             | 0.20              | 5           | 0                        | 121  | 70       | 130       | 0                     | 0    |          |      |
| 1,3-Butadiene             | 5.76             | 0.20              | 5           | 0                        | 115  | 70       | 130       | 0                     | 0    |          |      |
| 1,3-Dichlorobenzene       | 5.33             | 0.20              | 5           | 0                        | 107  | 70       | 130       | 0                     | 0    |          |      |
| 1,4-Dichlorobenzene       | 5.58             | 0.20              | 5           | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| 1,4-Dioxane               | 5.63             | 1.0               | 5           | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| 2-Butanone                | 6.12             | 0.50              | 5           | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| 2-Hexanone                | 6.69             | 1.0               | 5           | 0                        | 134  | 70       | 130       | 0                     | 0    |          | S    |
| 4-Ethyltoluene            | 5.67             | 0.20              | 5           | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| 4-Methyl-2-pentanone      | 6.38             | 1.0               | 5           | 0                        | 128  | 70       | 130       | 0                     | 0    |          |      |
| Acetone                   | 5.23             | 2.0               | 5           | 0                        | 105  | 70       | 130       | 0                     | 0    |          | *    |
| Benzene                   | 5.67             | 0.20              | 5           | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| Benzyl chloride           | 5.42             | 0.50              | 5           | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| Bromodichloromethane      | 5.66             | 0.20              | 5           | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| Bromoform                 | 5.4              | 0.50              | 5           | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| Bromomethane              | 4.65             | 0.50              | 5           | 0                        | 93   | 70       | 130       | 0                     | 0    |          |      |
| Carbon disulfide          | 4.95             | 0.20              | 5           | 0                        | 99   | 70       | 130       | 0                     | 0    |          |      |
| Carbon tetrachloride      | 5.85             | 0.20              | 5           | 0                        | 117  | 70       | 130       | 0                     | 0    |          |      |
| Chlorobenzene             | 5.37             | 0.20              | 5           | 0                        | 107  | 70       | 130       | 0                     | 0    |          |      |
| Chloroethane              | 6.15             | 0.20              | 5           | 0                        | 123  | 70       | 130       | 0                     | 0    |          |      |
| Chloroform                | 5.75             | 0.20              | 5           | 0                        | 115  | 70       | 130       | 0                     | 0    |          |      |

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**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82862**

| Sample ID: LCS082712-5    | SampType: LCS    | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120827A |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15     |             | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2229237        |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| Chloromethane             | 5                | 0.50              | 5           | 0                        | 100  | 70       | 130       | 0                     | 0    |          |      |
| cis-1,2-Dichloroethene    | 6.05             | 0.20              | 5           | 0.05                     | 120  | 70       | 130       | 0                     | 0    |          |      |
| cis-1,3-Dichloropropene   | 6.16             | 0.20              | 5           | 0                        | 123  | 70       | 130       | 0                     | 0    |          |      |
| Cyclohexane               | 6.12             | 0.20              | 5           | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| Dibromochloromethane      | 5.64             | 0.20              | 5           | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| Dichlorodifluoromethane   | 4.97             | 0.20              | 5           | 0                        | 99.4 | 70       | 130       | 0                     | 0    |          |      |
| Ethyl acetate             | 6.45             | 0.20              | 5           | 0                        | 129  | 70       | 130       | 0                     | 0    |          |      |
| Ethylbenzene              | 5.54             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| Freon-113                 | 4.69             | 0.20              | 5           | 0                        | 93.8 | 70       | 130       | 0                     | 0    |          |      |
| Freon-114                 | 5.1              | 1.0               | 5           | 0                        | 102  | 70       | 130       | 0                     | 0    |          |      |
| Heptane                   | 7.22             | 0.20              | 5           | 0                        | 144  | 70       | 130       | 0                     | 0    |          | S    |
| Hexachlorobutadiene       | 4.48             | 0.20              | 5           | 0                        | 89.6 | 70       | 130       | 0                     | 0    |          |      |
| Hexane                    | 7.06             | 0.50              | 5           | 0                        | 141  | 70       | 130       | 0                     | 0    |          | S    |
| Isopropyl Alcohol         | 6.25             | 1.0               | 5           | 0                        | 125  | 70       | 130       | 0                     | 0    |          |      |
| m,p-Xylene                | 11.39            | 0.40              | 10          | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |
| Methyl tert-butyl ether   | 5.8              | 0.20              | 5           | 0                        | 116  | 70       | 130       | 0                     | 0    |          |      |
| Methylene chloride        | 5.3              | 2.0               | 5           | 0                        | 106  | 70       | 130       | 0                     | 0    |          |      |
| o-Xylene                  | 5.77             | 0.20              | 5           | 0                        | 115  | 70       | 130       | 0                     | 0    |          |      |
| Propene                   | 5.8              | 2.0               | 5           | 0                        | 116  | 70       | 130       | 0                     | 0    |          |      |
| Styrene                   | 6.2              | 0.20              | 5           | 0                        | 124  | 70       | 130       | 0                     | 0    |          |      |
| Tetrachloroethene         | 4.92             | 0.20              | 5           | 0                        | 98.4 | 70       | 130       | 0                     | 0    |          |      |
| Tetrahydrofuran           | 6.51             | 0.50              | 5           | 0                        | 130  | 70       | 130       | 0                     | 0    |          | S    |
| Toluene                   | 5.69             | 0.20              | 5           | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |
| trans-1,2-Dichloroethene  | 5.56             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| trans-1,3-Dichloropropene | 4.68             | 0.20              | 5           | 0                        | 93.6 | 70       | 130       | 0                     | 0    |          |      |
| Trichloroethene           | 5.45             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 0                     | 0    |          |      |
| Trichlorofluoromethane    | 4.7              | 0.20              | 5           | 0                        | 94   | 70       | 130       | 0                     | 0    |          |      |
| Vinyl acetate             | 5.4              | 2.0               | 5           | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| Vinyl chloride            | 5.57             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| Xylenes, Total            | 17.16            | 0.60              | 15          | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |

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**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080703

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82862

| Sample ID: LCSD082712-5   | SampType: LCSD   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120827A |       |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15     |             | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2229238        |       |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 4.95             | 0.20              | 5           | 0                        | 99   | 70       | 130       | 4.94                  | 0.202 | 25       |      |
| 1,1,2,2-Tetrachloroethane | 6.66             | 0.20              | 5           | 0                        | 133  | 70       | 130       | 6.96                  | 4.41  | 25       | S    |
| 1,1,2-Trichloroethane     | 6.11             | 0.20              | 5           | 0                        | 122  | 70       | 130       | 6.33                  | 3.54  | 25       |      |
| 1,1-Dichloroethane        | 5.89             | 0.20              | 5           | 0                        | 118  | 70       | 130       | 5.97                  | 1.35  | 25       |      |
| 1,1-Dichloroethene        | 5.67             | 0.20              | 5           | 0                        | 113  | 70       | 130       | 5.99                  | 5.49  | 25       |      |
| 1,2,4-Trichlorobenzene    | 5.01             | 0.20              | 5           | 0                        | 100  | 70       | 130       | 5.45                  | 8.41  | 25       |      |
| 1,2,4-Trimethylbenzene    | 5.3              | 0.20              | 5           | 0                        | 106  | 70       | 130       | 5.6                   | 5.50  | 25       |      |
| 1,2-Dibromoethane         | 5.58             | 0.20              | 5           | 0                        | 112  | 70       | 130       | 5.73                  | 2.65  | 25       |      |
| 1,2-Dichlorobenzene       | 5.43             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 5.71                  | 5.03  | 25       |      |
| 1,2-Dichloroethane        | 6.23             | 0.20              | 5           | 0                        | 125  | 70       | 130       | 6.45                  | 3.47  | 25       |      |
| 1,2-Dichloropropane       | 5.93             | 0.20              | 5           | 0                        | 119  | 70       | 130       | 6.08                  | 2.50  | 25       |      |
| 1,3,5-Trimethylbenzene    | 5.71             | 0.20              | 5           | 0                        | 114  | 70       | 130       | 6.05                  | 5.78  | 25       |      |
| 1,3-Butadiene             | 5.62             | 0.20              | 5           | 0                        | 112  | 70       | 130       | 5.76                  | 2.46  | 25       |      |
| 1,3-Dichlorobenzene       | 5.08             | 0.20              | 5           | 0                        | 102  | 70       | 130       | 5.33                  | 4.80  | 25       |      |
| 1,4-Dichlorobenzene       | 5.27             | 0.20              | 5           | 0                        | 105  | 70       | 130       | 5.58                  | 5.71  | 25       |      |
| 1,4-Dioxane               | 5.26             | 1.0               | 5           | 0                        | 105  | 70       | 130       | 5.63                  | 6.80  | 25       |      |
| 2-Butanone                | 5.68             | 0.50              | 5           | 0                        | 114  | 70       | 130       | 6.12                  | 7.46  | 25       |      |
| 2-Hexanone                | 6.21             | 1.0               | 5           | 0                        | 124  | 70       | 130       | 6.69                  | 7.44  | 25       |      |
| 4-Ethyltoluene            | 5.36             | 0.20              | 5           | 0                        | 107  | 70       | 130       | 5.67                  | 5.62  | 25       |      |
| 4-Methyl-2-pentanone      | 5.93             | 1.0               | 5           | 0                        | 119  | 70       | 130       | 6.38                  | 7.31  | 25       |      |
| Acetone                   | 4.89             | 2.0               | 5           | 0                        | 97.8 | 70       | 130       | 5.23                  | 6.72  | 25       | *    |
| Benzene                   | 5.52             | 0.20              | 5           | 0                        | 110  | 70       | 130       | 5.67                  | 2.68  | 25       |      |
| Benzyl chloride           | 5.1              | 0.50              | 5           | 0                        | 102  | 70       | 130       | 5.42                  | 6.08  | 25       |      |
| Bromodichloromethane      | 5.6              | 0.20              | 5           | 0                        | 112  | 70       | 130       | 5.66                  | 1.07  | 25       |      |
| Bromoform                 | 5.2              | 0.50              | 5           | 0                        | 104  | 70       | 130       | 5.4                   | 3.77  | 25       |      |
| Bromomethane              | 4.46             | 0.50              | 5           | 0                        | 89.2 | 70       | 130       | 4.65                  | 4.17  | 25       |      |
| Carbon disulfide          | 4.85             | 0.20              | 5           | 0                        | 97   | 70       | 130       | 4.95                  | 2.04  | 25       |      |
| Carbon tetrachloride      | 5.81             | 0.20              | 5           | 0                        | 116  | 70       | 130       | 5.85                  | 0.686 | 25       |      |
| Chlorobenzene             | 5.17             | 0.20              | 5           | 0                        | 103  | 70       | 130       | 5.37                  | 3.80  | 25       |      |
| Chloroethane              | 5.91             | 0.20              | 5           | 0                        | 118  | 70       | 130       | 6.15                  | 3.98  | 25       |      |
| Chloroform                | 5.61             | 0.20              | 5           | 0                        | 112  | 70       | 130       | 5.75                  | 2.46  | 25       |      |

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**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080703

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82862

| Sample ID: LCSD082712-5   | SampType: LCSD   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120827A |       |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15     |             | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2229238        |       |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| Chloromethane             | 4.97             | 0.50              | 5           | 0                        | 99.4 | 70       | 130       | 5                     | 0.602 | 25       |      |
| cis-1,2-Dichloroethene    | 5.4              | 0.20              | 5           | 0.05                     | 107  | 70       | 130       | 6.05                  | 11.4  | 25       |      |
| cis-1,3-Dichloropropene   | 6.01             | 0.20              | 5           | 0                        | 120  | 70       | 130       | 6.16                  | 2.47  | 25       |      |
| Cyclohexane               | 5.95             | 0.20              | 5           | 0                        | 119  | 70       | 130       | 6.12                  | 2.82  | 25       |      |
| Dibromochloromethane      | 5.46             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 5.64                  | 3.24  | 25       |      |
| Dichlorodifluoromethane   | 4.77             | 0.20              | 5           | 0                        | 95.4 | 70       | 130       | 4.97                  | 4.11  | 25       |      |
| Ethyl acetate             | 6.32             | 0.20              | 5           | 0                        | 126  | 70       | 130       | 6.45                  | 2.04  | 25       |      |
| Ethylbenzene              | 5.34             | 0.20              | 5           | 0                        | 107  | 70       | 130       | 5.54                  | 3.68  | 25       |      |
| Freon-113                 | 4.52             | 0.20              | 5           | 0                        | 90.4 | 70       | 130       | 4.69                  | 3.69  | 25       |      |
| Freon-114                 | 4.86             | 1.0               | 5           | 0                        | 97.2 | 70       | 130       | 5.1                   | 4.82  | 25       |      |
| Heptane                   | 6.98             | 0.20              | 5           | 0                        | 140  | 70       | 130       | 7.22                  | 3.38  | 25       | S    |
| Hexachlorobutadiene       | 4.12             | 0.20              | 5           | 0                        | 82.4 | 70       | 130       | 4.48                  | 8.37  | 25       |      |
| Hexane                    | 6.83             | 0.50              | 5           | 0                        | 137  | 70       | 130       | 7.06                  | 3.31  | 25       | S    |
| Isopropyl Alcohol         | 5.59             | 1.0               | 5           | 0                        | 112  | 70       | 130       | 6.25                  | 11.1  | 25       |      |
| m,p-Xylene                | 10.85            | 0.40              | 10          | 0                        | 108  | 70       | 130       | 11.39                 | 4.86  | 25       |      |
| Methyl tert-butyl ether   | 5.54             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 5.8                   | 4.59  | 25       |      |
| Methylene chloride        | 4.67             | 2.0               | 5           | 0                        | 93.4 | 70       | 130       | 5.3                   | 12.6  | 25       |      |
| o-Xylene                  | 5.46             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 5.77                  | 5.52  | 25       |      |
| Propene                   | 5.58             | 2.0               | 5           | 0                        | 112  | 70       | 130       | 5.8                   | 3.87  | 25       |      |
| Styrene                   | 5.92             | 0.20              | 5           | 0                        | 118  | 70       | 130       | 6.2                   | 4.62  | 25       |      |
| Tetrachloroethene         | 4.75             | 0.20              | 5           | 0                        | 95   | 70       | 130       | 4.92                  | 3.52  | 25       |      |
| Tetrahydrofuran           | 6.09             | 0.50              | 5           | 0                        | 122  | 70       | 130       | 6.51                  | 6.67  | 25       |      |
| Toluene                   | 5.48             | 0.20              | 5           | 0                        | 110  | 70       | 130       | 5.69                  | 3.76  | 25       |      |
| trans-1,2-Dichloroethene  | 5.35             | 0.20              | 5           | 0                        | 107  | 70       | 130       | 5.56                  | 3.85  | 25       |      |
| trans-1,3-Dichloropropene | 4.64             | 0.20              | 5           | 0                        | 92.8 | 70       | 130       | 4.68                  | 0.858 | 25       |      |
| Trichloroethene           | 5.16             | 0.20              | 5           | 0                        | 103  | 70       | 130       | 5.45                  | 5.47  | 25       |      |
| Trichlorofluoromethane    | 4.51             | 0.20              | 5           | 0                        | 90.2 | 70       | 130       | 4.7                   | 4.13  | 25       |      |
| Vinyl acetate             | 5.21             | 2.0               | 5           | 0                        | 104  | 70       | 130       | 5.4                   | 3.58  | 25       |      |
| Vinyl chloride            | 5.28             | 0.20              | 5           | 0                        | 106  | 70       | 130       | 5.57                  | 5.35  | 25       |      |
| Xylenes, Total            | 16.31            | 0.60              | 15          | 0                        | 109  | 70       | 130       | 17.16                 | 5.08  | 25       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82862

| Sample ID: MB082712-5     | SampType: MBLK   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          | Run ID: VOA-5_120827A |             |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15      |              | Analysis Date: 8/27/2012 |      |          | SeqNo: 2317540        |             |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 1.4                |              |                          |      |          |                       |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trichlorobenzene    | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trimethylbenzene    | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dibromoethane         | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| 1,3,5-Trimethylbenzene    | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 1,3-Butadiene             | ND               | 0.40               |              |                          |      |          |                       |             |      |          |      |
| 1,3-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,4-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,4-Dioxane               | ND               | 1.8                |              |                          |      |          |                       |             |      |          |      |
| 2-Butanone                | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 2-Hexanone                | ND               | 4.1                |              |                          |      |          |                       |             |      |          |      |
| 4-Ethyltoluene            | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 4.1                |              |                          |      |          |                       |             |      |          |      |
| Acetone                   | ND               | 4.8                |              |                          |      |          |                       |             |      |          | *    |
| Benzene                   | ND               | 0.60               |              |                          |      |          |                       |             |      |          |      |
| Benzyl chloride           | ND               | 2.6                |              |                          |      |          |                       |             |      |          |      |
| Bromodichloromethane      | ND               | 1.3                |              |                          |      |          |                       |             |      |          |      |
| Bromoform                 | ND               | 5.2                |              |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 1.9                |              |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.60               |              |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 1.3                |              |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.50               |              |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |

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B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82862

| Sample ID: MB082712-5     | SampType: MBLK   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          | Run ID: VOA-5_120827A |             |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15      |              | Analysis Date: 8/27/2012 |      |          | SeqNo: 2317540        |             |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloromethane             | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | 0.1982           | 0.80               |              |                          |      |          |                       |             |      |          | J    |
| cis-1,3-Dichloropropene   | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Cyclohexane               | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 1.7                |              |                          |      |          |                       |             |      |          |      |
| Dichlorodifluoromethane   | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| Ethyl acetate             | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Freon-113                 | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| Freon-114                 | ND               | 7.0                |              |                          |      |          |                       |             |      |          |      |
| Heptane                   | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| Hexachlorobutadiene       | ND               | 2.1                |              |                          |      |          |                       |             |      |          |      |
| Hexane                    | ND               | 1.8                |              |                          |      |          |                       |             |      |          |      |
| Isopropyl Alcohol         | ND               | 2.5                |              |                          |      |          |                       |             |      |          |      |
| m,p-Xylene                | ND               | 1.7                |              |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | ND               | 6.9                |              |                          |      |          |                       |             |      |          |      |
| o-Xylene                  | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Propene                   | ND               | 3.4                |              |                          |      |          |                       |             |      |          |      |
| Styrene                   | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 1.4                |              |                          |      |          |                       |             |      |          |      |
| Tetrahydrofuran           | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| Trichlorofluoromethane    | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| Vinyl acetate             | ND               | 7.0                |              |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.50               |              |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 2.6                |              |                          |      |          |                       |             |      |          |      |

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**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82862**

| Sample ID: LCS082712-5    | SampType: LCS    | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120827A |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15      |              | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2317541        |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 26.95            | 1.1                | 27.28        | 0                        | 98.8 | 70       | 130       | 0                     | 0    |          |      |
| 1,1,2,2-Tetrachloroethane | 47.79            | 1.4                | 34.34        | 0                        | 139  | 70       | 130       | 0                     | 0    |          |      |
| 1,1,2-Trichloroethane     | 34.54            | 1.1                | 27.28        | 0                        | 127  | 70       | 130       | 0                     | 0    |          |      |
| 1,1-Dichloroethane        | 24.16            | 0.80               | 20.24        | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| 1,1-Dichloroethene        | 23.75            | 0.80               | 19.82        | 0                        | 120  | 70       | 130       | 0                     | 0    |          |      |
| 1,2,4-Trichlorobenzene    | 40.45            | 1.5                | 37.11        | 0                        | 109  | 70       | 130       | 0                     | 0    |          |      |
| 1,2,4-Trimethylbenzene    | 27.53            | 1.0                | 24.58        | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dibromoethane         | 44.03            | 1.5                | 38.42        | 0                        | 115  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichlorobenzene       | 34.33            | 1.2                | 30.06        | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloroethane        | 26.11            | 0.80               | 20.24        | 0                        | 129  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloropropane       | 28.1             | 0.90               | 23.11        | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| 1,3,5-Trimethylbenzene    | 29.74            | 1.0                | 24.58        | 0                        | 121  | 70       | 130       | 0                     | 0    |          |      |
| 1,3-Butadiene             | 12.74            | 0.40               | 11.06        | 0                        | 115  | 70       | 130       | 0                     | 0    |          |      |
| 1,3-Dichlorobenzene       | 32.05            | 1.2                | 30.06        | 0                        | 107  | 70       | 130       | 0                     | 0    |          |      |
| 1,4-Dichlorobenzene       | 33.55            | 1.2                | 30.06        | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| 1,4-Dioxane               | 20.29            | 1.8                | 18.02        | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| 2-Butanone                | 18.05            | 1.5                | 14.75        | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| 2-Hexanone                | 27.41            | 4.1                | 20.48        | 0                        | 134  | 70       | 130       | 0                     | 0    |          |      |
| 4-Ethyltoluene            | 27.87            | 1.0                | 24.58        | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| 4-Methyl-2-pentanone      | 26.14            | 4.1                | 20.48        | 0                        | 128  | 70       | 130       | 0                     | 0    |          |      |
| Acetone                   | 12.42            | 4.8                | 11.88        | 0                        | 105  | 70       | 130       | 0                     | 0    |          | *    |
| Benzene                   | 18.11            | 0.60               | 15.97        | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| Benzyl chloride           | 28.06            | 2.6                | 25.89        | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| Bromodichloromethane      | 37.93            | 1.3                | 33.5         | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| Bromoform                 | 55.82            | 5.2                | 51.68        | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| Bromomethane              | 18.06            | 1.9                | 19.42        | 0                        | 93   | 70       | 130       | 0                     | 0    |          |      |
| Carbon disulfide          | 15.41            | 0.60               | 15.57        | 0                        | 99   | 70       | 130       | 0                     | 0    |          |      |
| Carbon tetrachloride      | 36.8             | 1.3                | 31.46        | 0                        | 117  | 70       | 130       | 0                     | 0    |          |      |
| Chlorobenzene             | 24.72            | 0.90               | 23.02        | 0                        | 107  | 70       | 130       | 0                     | 0    |          |      |
| Chloroethane              | 16.23            | 0.50               | 13.19        | 0                        | 123  | 70       | 130       | 0                     | 0    |          |      |
| Chloroform                | 28.08            | 1.0                | 24.41        | 0                        | 115  | 70       | 130       | 0                     | 0    |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
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 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82862**

| Sample ID: LCS082712-5    | SampType: LCS    | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120827A |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15      |              | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2317541        |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| Chloromethane             | 10.33            | 1.0                | 10.33        | 0                        | 100  | 70       | 130       | 0                     | 0    |          |      |
| cis-1,2-Dichloroethene    | 23.99            | 0.80               | 19.82        | 0.1982                   | 120  | 70       | 130       | 0                     | 0    |          |      |
| cis-1,3-Dichloropropene   | 27.96            | 0.90               | 22.69        | 0                        | 123  | 70       | 130       | 0                     | 0    |          |      |
| Cyclohexane               | 21.07            | 0.70               | 17.21        | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| Dibromochloromethane      | 48.04            | 1.7                | 42.59        | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| Dichlorodifluoromethane   | 24.58            | 1.0                | 24.73        | 0                        | 99.4 | 70       | 130       | 0                     | 0    |          |      |
| Ethyl acetate             | 23.24            | 0.70               | 18.02        | 0                        | 129  | 70       | 130       | 0                     | 0    |          |      |
| Ethylbenzene              | 24.05            | 0.90               | 21.71        | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| Freon-113                 | 35.94            | 1.5                | 38.32        | 0                        | 93.8 | 70       | 130       | 0                     | 0    |          |      |
| Freon-114                 | 35.65            | 7.0                | 34.95        | 0                        | 102  | 70       | 130       | 0                     | 0    |          |      |
| Heptane                   | 29.59            | 0.80               | 20.49        | 0                        | 144  | 70       | 130       | 0                     | 0    |          | S    |
| Hexachlorobutadiene       | 47.78            | 2.1                | 53.33        | 0                        | 89.6 | 70       | 130       | 0                     | 0    |          |      |
| Hexane                    | 24.88            | 1.8                | 17.62        | 0                        | 141  | 70       | 130       | 0                     | 0    |          | S    |
| Isopropyl Alcohol         | 15.36            | 2.5                | 12.29        | 0                        | 125  | 70       | 130       | 0                     | 0    |          |      |
| m,p-Xylene                | 49.45            | 1.7                | 43.42        | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |
| Methyl tert-butyl ether   | 20.91            | 0.70               | 18.03        | 0                        | 116  | 70       | 130       | 0                     | 0    |          |      |
| Methylene chloride        | 18.41            | 6.9                | 17.37        | 0                        | 106  | 70       | 130       | 0                     | 0    |          |      |
| o-Xylene                  | 25.05            | 0.90               | 21.71        | 0                        | 115  | 70       | 130       | 0                     | 0    |          |      |
| Propene                   | 9.982            | 3.4                | 8.605        | 0                        | 116  | 70       | 130       | 0                     | 0    |          |      |
| Styrene                   | 26.41            | 0.90               | 21.3         | 0                        | 124  | 70       | 130       | 0                     | 0    |          |      |
| Tetrachloroethene         | 33.37            | 1.4                | 33.91        | 0                        | 98.4 | 70       | 130       | 0                     | 0    |          |      |
| Tetrahydrofuran           | 19.2             | 1.5                | 14.75        | 0                        | 130  | 70       | 130       | 0                     | 0    |          | S    |
| Toluene                   | 21.44            | 0.80               | 18.84        | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |
| trans-1,2-Dichloroethene  | 22.04            | 0.80               | 19.82        | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| trans-1,3-Dichloropropene | 21.24            | 0.90               | 22.69        | 0                        | 93.6 | 70       | 130       | 0                     | 0    |          |      |
| Trichloroethene           | 29.29            | 1.1                | 26.87        | 0                        | 109  | 70       | 130       | 0                     | 0    |          |      |
| Trichlorofluoromethane    | 26.41            | 1.1                | 28.09        | 0                        | 94   | 70       | 130       | 0                     | 0    |          |      |
| Vinyl acetate             | 19.01            | 7.0                | 17.61        | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| Vinyl chloride            | 14.24            | 0.50               | 12.78        | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| Xylenes, Total            | 74.51            | 2.6                | 65.13        | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |

|                    |  |   |   |
|--------------------|--|---|---|
| <b>Qualifiers:</b> | ND - Not Detected at the Reporting Limit       | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in the associated Method Blank |
|                    | J - Analyte detected below quantitation limits | R - RPD outside accepted recovery limits            | E - Value above quantitation range                  |
|                    | * - Non Accredited Parameter                   | H/HT - Holding Time Exceeded                        |   |

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82862**

| Sample ID: LCSD082712-5   | SampType: LCSD   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120827A |       |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15      |              | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2317542        |       |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 27.01            | 1.1                | 27.28        | 0                        | 99   | 70       | 130       | 26.95                 | 0.202 | 25       |      |
| 1,1,2,2-Tetrachloroethane | 45.73            | 1.4                | 34.34        | 0                        | 133  | 70       | 130       | 47.79                 | 4.41  | 25       | S    |
| 1,1,2-Trichloroethane     | 33.34            | 1.1                | 27.28        | 0                        | 122  | 70       | 130       | 34.54                 | 3.54  | 25       |      |
| 1,1-Dichloroethane        | 23.84            | 0.80               | 20.24        | 0                        | 118  | 70       | 130       | 24.16                 | 1.35  | 25       |      |
| 1,1-Dichloroethene        | 22.48            | 0.80               | 19.82        | 0                        | 113  | 70       | 130       | 23.75                 | 5.49  | 25       |      |
| 1,2,4-Trichlorobenzene    | 37.18            | 1.5                | 37.11        | 0                        | 100  | 70       | 130       | 40.45                 | 8.41  | 25       |      |
| 1,2,4-Trimethylbenzene    | 26.05            | 1.0                | 24.58        | 0                        | 106  | 70       | 130       | 27.53                 | 5.50  | 25       |      |
| 1,2-Dibromoethane         | 42.87            | 1.5                | 38.42        | 0                        | 112  | 70       | 130       | 44.03                 | 2.65  | 25       |      |
| 1,2-Dichlorobenzene       | 32.65            | 1.2                | 30.06        | 0                        | 109  | 70       | 130       | 34.33                 | 5.03  | 25       |      |
| 1,2-Dichloroethane        | 25.22            | 0.80               | 20.24        | 0                        | 125  | 70       | 130       | 26.11                 | 3.47  | 25       |      |
| 1,2-Dichloropropane       | 27.4             | 0.90               | 23.11        | 0                        | 119  | 70       | 130       | 28.1                  | 2.50  | 25       |      |
| 1,3,5-Trimethylbenzene    | 28.07            | 1.0                | 24.58        | 0                        | 114  | 70       | 130       | 29.74                 | 5.78  | 25       |      |
| 1,3-Butadiene             | 12.43            | 0.40               | 11.06        | 0                        | 112  | 70       | 130       | 12.74                 | 2.46  | 25       |      |
| 1,3-Dichlorobenzene       | 30.54            | 1.2                | 30.06        | 0                        | 102  | 70       | 130       | 32.05                 | 4.80  | 25       |      |
| 1,4-Dichlorobenzene       | 31.68            | 1.2                | 30.06        | 0                        | 105  | 70       | 130       | 33.55                 | 5.71  | 25       |      |
| 1,4-Dioxane               | 18.96            | 1.8                | 18.02        | 0                        | 105  | 70       | 130       | 20.29                 | 6.80  | 25       |      |
| 2-Butanone                | 16.75            | 1.5                | 14.75        | 0                        | 114  | 70       | 130       | 18.05                 | 7.46  | 25       |      |
| 2-Hexanone                | 25.44            | 4.1                | 20.48        | 0                        | 124  | 70       | 130       | 27.41                 | 7.44  | 25       |      |
| 4-Ethyltoluene            | 26.35            | 1.0                | 24.58        | 0                        | 107  | 70       | 130       | 27.87                 | 5.62  | 25       |      |
| 4-Methyl-2-pentanone      | 24.29            | 4.1                | 20.48        | 0                        | 119  | 70       | 130       | 26.14                 | 7.31  | 25       |      |
| Acetone                   | 11.62            | 4.8                | 11.88        | 0                        | 97.8 | 70       | 130       | 12.42                 | 6.72  | 25       | *    |
| Benzene                   | 17.63            | 0.60               | 15.97        | 0                        | 110  | 70       | 130       | 18.11                 | 2.68  | 25       |      |
| Benzyl chloride           | 26.4             | 2.6                | 25.89        | 0                        | 102  | 70       | 130       | 28.06                 | 6.08  | 25       |      |
| Bromodichloromethane      | 37.52            | 1.3                | 33.5         | 0                        | 112  | 70       | 130       | 37.93                 | 1.07  | 25       |      |
| Bromoform                 | 53.75            | 5.2                | 51.68        | 0                        | 104  | 70       | 130       | 55.82                 | 3.77  | 25       |      |
| Bromomethane              | 17.32            | 1.9                | 19.42        | 0                        | 89.2 | 70       | 130       | 18.06                 | 4.17  | 25       |      |
| Carbon disulfide          | 15.1             | 0.60               | 15.57        | 0                        | 97   | 70       | 130       | 15.41                 | 2.04  | 25       |      |
| Carbon tetrachloride      | 36.55            | 1.3                | 31.46        | 0                        | 116  | 70       | 130       | 36.8                  | 0.686 | 25       |      |
| Chlorobenzene             | 23.8             | 0.90               | 23.02        | 0                        | 103  | 70       | 130       | 24.72                 | 3.80  | 25       |      |
| Chloroethane              | 15.59            | 0.50               | 13.19        | 0                        | 118  | 70       | 130       | 16.23                 | 3.98  | 25       |      |
| Chloroform                | 27.39            | 1.0                | 24.41        | 0                        | 112  | 70       | 130       | 28.08                 | 2.46  | 25       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82862**

| Sample ID: LCSD082712-5   | SampType: LCSD   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120827A |       |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82862 | TestNo: TO-15      |              | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2317542        |       |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| Chloromethane             | 10.26            | 1.0                | 10.33        | 0                        | 99.4 | 70       | 130       | 10.33                 | 0.602 | 25       |      |
| cis-1,2-Dichloroethene    | 21.41            | 0.80               | 19.82        | 0.1982                   | 107  | 70       | 130       | 23.99                 | 11.4  | 25       |      |
| cis-1,3-Dichloropropene   | 27.28            | 0.90               | 22.69        | 0                        | 120  | 70       | 130       | 27.96                 | 2.47  | 25       |      |
| Cyclohexane               | 20.48            | 0.70               | 17.21        | 0                        | 119  | 70       | 130       | 21.07                 | 2.82  | 25       |      |
| Dibromochloromethane      | 46.51            | 1.7                | 42.59        | 0                        | 109  | 70       | 130       | 48.04                 | 3.24  | 25       |      |
| Dichlorodifluoromethane   | 23.59            | 1.0                | 24.73        | 0                        | 95.4 | 70       | 130       | 24.58                 | 4.11  | 25       |      |
| Ethyl acetate             | 22.78            | 0.70               | 18.02        | 0                        | 126  | 70       | 130       | 23.24                 | 2.04  | 25       |      |
| Ethylbenzene              | 23.19            | 0.90               | 21.71        | 0                        | 107  | 70       | 130       | 24.05                 | 3.68  | 25       |      |
| Freon-113                 | 34.64            | 1.5                | 38.32        | 0                        | 90.4 | 70       | 130       | 35.94                 | 3.69  | 25       |      |
| Freon-114                 | 33.97            | 7.0                | 34.95        | 0                        | 97.2 | 70       | 130       | 35.65                 | 4.82  | 25       |      |
| Heptane                   | 28.61            | 0.80               | 20.49        | 0                        | 140  | 70       | 130       | 29.59                 | 3.38  | 25       | S    |
| Hexachlorobutadiene       | 43.94            | 2.1                | 53.33        | 0                        | 82.4 | 70       | 130       | 47.78                 | 8.37  | 25       |      |
| Hexane                    | 24.07            | 1.8                | 17.62        | 0                        | 137  | 70       | 130       | 24.88                 | 3.31  | 25       | S    |
| Isopropyl Alcohol         | 13.74            | 2.5                | 12.29        | 0                        | 112  | 70       | 130       | 15.36                 | 11.1  | 25       |      |
| m,p-Xylene                | 47.11            | 1.7                | 43.42        | 0                        | 109  | 70       | 130       | 49.45                 | 4.86  | 25       |      |
| Methyl tert-butyl ether   | 19.97            | 0.70               | 18.03        | 0                        | 111  | 70       | 130       | 20.91                 | 4.59  | 25       |      |
| Methylene chloride        | 16.22            | 6.9                | 17.37        | 0                        | 93.4 | 70       | 130       | 18.41                 | 12.6  | 25       |      |
| o-Xylene                  | 23.71            | 0.90               | 21.71        | 0                        | 109  | 70       | 130       | 25.05                 | 5.52  | 25       |      |
| Propene                   | 9.604            | 3.4                | 8.605        | 0                        | 112  | 70       | 130       | 9.982                 | 3.87  | 25       |      |
| Styrene                   | 25.22            | 0.90               | 21.3         | 0                        | 118  | 70       | 130       | 26.41                 | 4.62  | 25       |      |
| Tetrachloroethene         | 32.22            | 1.4                | 33.91        | 0                        | 95   | 70       | 130       | 33.37                 | 3.52  | 25       |      |
| Tetrahydrofuran           | 17.96            | 1.5                | 14.75        | 0                        | 122  | 70       | 130       | 19.2                  | 6.67  | 25       |      |
| Toluene                   | 20.65            | 0.80               | 18.84        | 0                        | 110  | 70       | 130       | 21.44                 | 3.76  | 25       |      |
| trans-1,2-Dichloroethene  | 21.21            | 0.80               | 19.82        | 0                        | 107  | 70       | 130       | 22.04                 | 3.85  | 25       |      |
| trans-1,3-Dichloropropene | 21.06            | 0.90               | 22.69        | 0                        | 92.8 | 70       | 130       | 21.24                 | 0.858 | 25       |      |
| Trichloroethene           | 27.73            | 1.1                | 26.87        | 0                        | 103  | 70       | 130       | 29.29                 | 5.47  | 25       |      |
| Trichlorofluoromethane    | 25.34            | 1.1                | 28.09        | 0                        | 90.2 | 70       | 130       | 26.41                 | 4.13  | 25       |      |
| Vinyl acetate             | 18.34            | 7.0                | 17.61        | 0                        | 104  | 70       | 130       | 19.01                 | 3.58  | 25       |      |
| Vinyl chloride            | 13.5             | 0.50               | 12.78        | 0                        | 106  | 70       | 130       | 14.24                 | 5.35  | 25       |      |
| Xylenes, Total            | 70.82            | 2.6                | 65.13        | 0                        | 109  | 70       | 130       | 74.51                 | 5.08  | 25       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82878

| Sample ID: MB082812-5     | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120828A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15     |             | Analysis Date: 8/28/2012 |      |          | SeqNo: 2229709        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trichlorobenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dibromoethane         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3,5-Trimethylbenzene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Butadiene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,3-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dichlorobenzene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 1,4-Dioxane               | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 2-Butanone                | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| 2-Hexanone                | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| 4-Ethyltoluene            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| Acetone                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          | *    |
| Benzene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Benzyl chloride           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromodichloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Bromoform                 | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82878

| Sample ID: MB082812-5     | SampType: MBLK   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          | Run ID: VOA-5_120828A |             |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15     |             | Analysis Date: 8/28/2012 |      |          | SeqNo: 2229709        |             |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloromethane             | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| cis-1,3-Dichloropropene   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Cyclohexane               | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Dichlorodifluoromethane   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethyl acetate             | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-113                 | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Freon-114                 | 0.05             | 1.0               |             |                          |      |          |                       |             |      |          | J    |
| Heptane                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexachlorobutadiene       | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Hexane                    | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Isopropyl Alcohol         | ND               | 1.0               |             |                          |      |          |                       |             |      |          |      |
| m,p-Xylene                | ND               | 0.40              |             |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| o-Xylene                  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Propene                   | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Styrene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Tetrahydrofuran           | ND               | 0.50              |             |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Trichlorofluoromethane    | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Vinyl acetate             | ND               | 2.0               |             |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.20              |             |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 0.60              |             |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080703

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82878

| Sample ID: LCS082812-5    | SampType: LCS    | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120828A |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15     |             | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2229710        |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 4.96             | 0.20              | 5           | 0                        | 99.2 | 70       | 130       | 0                     | 0    |          |      |
| 1,1,2,2-Tetrachloroethane | 6.89             | 0.20              | 5           | 0                        | 138  | 70       | 130       | 0                     | 0    |          | S    |
| 1,1,2-Trichloroethane     | 6.21             | 0.20              | 5           | 0                        | 124  | 70       | 130       | 0                     | 0    |          |      |
| 1,1-Dichloroethane        | 5.97             | 0.20              | 5           | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| 1,1-Dichloroethene        | 5.69             | 0.20              | 5           | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |
| 1,2,4-Trichlorobenzene    | 5.36             | 0.20              | 5           | 0                        | 107  | 70       | 130       | 0                     | 0    |          |      |
| 1,2,4-Trimethylbenzene    | 5.53             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dibromoethane         | 5.67             | 0.20              | 5           | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichlorobenzene       | 5.63             | 0.20              | 5           | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloroethane        | 6.43             | 0.20              | 5           | 0                        | 129  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloropropane       | 6.04             | 0.20              | 5           | 0                        | 121  | 70       | 130       | 0                     | 0    |          |      |
| 1,3,5-Trimethylbenzene    | 5.96             | 0.20              | 5           | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| 1,3-Butadiene             | 5.52             | 0.20              | 5           | 0                        | 110  | 70       | 130       | 0                     | 0    |          |      |
| 1,3-Dichlorobenzene       | 5.26             | 0.20              | 5           | 0                        | 105  | 70       | 130       | 0                     | 0    |          |      |
| 1,4-Dichlorobenzene       | 5.48             | 0.20              | 5           | 0                        | 110  | 70       | 130       | 0                     | 0    |          |      |
| 1,4-Dioxane               | 5.48             | 1.0               | 5           | 0                        | 110  | 70       | 130       | 0                     | 0    |          |      |
| 2-Butanone                | 5.9              | 0.50              | 5           | 0                        | 118  | 70       | 130       | 0                     | 0    |          |      |
| 2-Hexanone                | 6.68             | 1.0               | 5           | 0                        | 134  | 70       | 130       | 0                     | 0    |          | S    |
| 4-Ethyltoluene            | 5.58             | 0.20              | 5           | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| 4-Methyl-2-pentanone      | 6.3              | 1.0               | 5           | 0                        | 126  | 70       | 130       | 0                     | 0    |          |      |
| Acetone                   | 4.8              | 2.0               | 5           | 0                        | 96   | 70       | 130       | 0                     | 0    |          | *    |
| Benzene                   | 5.57             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| Benzyl chloride           | 5.39             | 0.50              | 5           | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| Bromodichloromethane      | 5.7              | 0.20              | 5           | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |
| Bromoform                 | 5.3              | 0.50              | 5           | 0                        | 106  | 70       | 130       | 0                     | 0    |          |      |
| Bromomethane              | 4.54             | 0.50              | 5           | 0                        | 90.8 | 70       | 130       | 0                     | 0    |          |      |
| Carbon disulfide          | 4.83             | 0.20              | 5           | 0                        | 96.6 | 70       | 130       | 0                     | 0    |          |      |
| Carbon tetrachloride      | 5.95             | 0.20              | 5           | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| Chlorobenzene             | 5.31             | 0.20              | 5           | 0                        | 106  | 70       | 130       | 0                     | 0    |          |      |
| Chloroethane              | 5.93             | 0.20              | 5           | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| Chloroform                | 5.76             | 0.20              | 5           | 0                        | 115  | 70       | 130       | 0                     | 0    |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82878**

| Sample ID: LCS082812-5    | SampType: LCS    | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120828A |      |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15     |             | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2229710        |      |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| Chloromethane             | 4.87             | 0.50              | 5           | 0                        | 97.4 | 70       | 130       | 0                     | 0    |          |      |
| cis-1,2-Dichloroethene    | 5.42             | 0.20              | 5           | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| cis-1,3-Dichloropropene   | 6.16             | 0.20              | 5           | 0                        | 123  | 70       | 130       | 0                     | 0    |          |      |
| Cyclohexane               | 6.03             | 0.20              | 5           | 0                        | 121  | 70       | 130       | 0                     | 0    |          |      |
| Dibromochloromethane      | 5.59             | 0.20              | 5           | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| Dichlorodifluoromethane   | 4.83             | 0.20              | 5           | 0                        | 96.6 | 70       | 130       | 0                     | 0    |          |      |
| Ethyl acetate             | 6.59             | 0.20              | 5           | 0                        | 132  | 70       | 130       | 0                     | 0    |          | S    |
| Ethylbenzene              | 5.41             | 0.20              | 5           | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| Freon-113                 | 4.55             | 0.20              | 5           | 0                        | 91   | 70       | 130       | 0                     | 0    |          |      |
| Freon-114                 | 4.88             | 1.0               | 5           | 0.05                     | 96.6 | 70       | 130       | 0                     | 0    |          |      |
| Heptane                   | 7.13             | 0.20              | 5           | 0                        | 143  | 70       | 130       | 0                     | 0    |          | S    |
| Hexachlorobutadiene       | 4.49             | 0.20              | 5           | 0                        | 89.8 | 70       | 130       | 0                     | 0    |          |      |
| Hexane                    | 6.91             | 0.50              | 5           | 0                        | 138  | 70       | 130       | 0                     | 0    |          | S    |
| Isopropyl Alcohol         | 6.09             | 1.0               | 5           | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| m,p-Xylene                | 11.15            | 0.40              | 10          | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| Methyl tert-butyl ether   | 5.54             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| Methylene chloride        | 4.69             | 2.0               | 5           | 0                        | 93.8 | 70       | 130       | 0                     | 0    |          |      |
| o-Xylene                  | 5.67             | 0.20              | 5           | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| Propene                   | 5.6              | 2.0               | 5           | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| Styrene                   | 6.09             | 0.20              | 5           | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| Tetrachloroethene         | 4.79             | 0.20              | 5           | 0                        | 95.8 | 70       | 130       | 0                     | 0    |          |      |
| Tetrahydrofuran           | 6.44             | 0.50              | 5           | 0                        | 129  | 70       | 130       | 0                     | 0    |          |      |
| Toluene                   | 5.57             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| trans-1,2-Dichloroethene  | 5.31             | 0.20              | 5           | 0                        | 106  | 70       | 130       | 0                     | 0    |          |      |
| trans-1,3-Dichloropropene | 4.76             | 0.20              | 5           | 0                        | 95.2 | 70       | 130       | 0                     | 0    |          |      |
| Trichloroethene           | 5.23             | 0.20              | 5           | 0                        | 105  | 70       | 130       | 0                     | 0    |          |      |
| Trichlorofluoromethane    | 4.58             | 0.20              | 5           | 0                        | 91.6 | 70       | 130       | 0                     | 0    |          |      |
| Vinyl acetate             | 5.48             | 2.0               | 5           | 0                        | 110  | 70       | 130       | 0                     | 0    |          |      |
| Vinyl chloride            | 5.29             | 0.20              | 5           | 0                        | 106  | 70       | 130       | 0                     | 0    |          |      |
| Xylenes, Total            | 16.81            | 0.60              | 15          | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82878**

| Sample ID: LCSD082812-5   | SampType: LCSD   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120828A |       |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15     |             | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2229711        |       |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 4.93             | 0.20              | 5           | 0                        | 98.6 | 70       | 130       | 4.96                  | 0.607 | 25       |      |
| 1,1,2,2-Tetrachloroethane | 6.86             | 0.20              | 5           | 0                        | 137  | 70       | 130       | 6.89                  | 0.436 | 25       | S    |
| 1,1,2-Trichloroethane     | 6.2              | 0.20              | 5           | 0                        | 124  | 70       | 130       | 6.21                  | 0.161 | 25       |      |
| 1,1-Dichloroethane        | 5.92             | 0.20              | 5           | 0                        | 118  | 70       | 130       | 5.97                  | 0.841 | 25       |      |
| 1,1-Dichloroethene        | 5.63             | 0.20              | 5           | 0                        | 113  | 70       | 130       | 5.69                  | 1.06  | 25       |      |
| 1,2,4-Trichlorobenzene    | 5.09             | 0.20              | 5           | 0                        | 102  | 70       | 130       | 5.36                  | 5.17  | 25       |      |
| 1,2,4-Trimethylbenzene    | 5.43             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 5.53                  | 1.82  | 25       |      |
| 1,2-Dibromoethane         | 5.67             | 0.20              | 5           | 0                        | 113  | 70       | 130       | 5.67                  | 0     | 25       |      |
| 1,2-Dichlorobenzene       | 5.55             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 5.63                  | 1.43  | 25       |      |
| 1,2-Dichloroethane        | 6.39             | 0.20              | 5           | 0                        | 128  | 70       | 130       | 6.43                  | 0.624 | 25       |      |
| 1,2-Dichloropropane       | 6.08             | 0.20              | 5           | 0                        | 122  | 70       | 130       | 6.04                  | 0.660 | 25       |      |
| 1,3,5-Trimethylbenzene    | 5.83             | 0.20              | 5           | 0                        | 117  | 70       | 130       | 5.96                  | 2.21  | 25       |      |
| 1,3-Butadiene             | 5.48             | 0.20              | 5           | 0                        | 110  | 70       | 130       | 5.52                  | 0.727 | 25       |      |
| 1,3-Dichlorobenzene       | 5.19             | 0.20              | 5           | 0                        | 104  | 70       | 130       | 5.26                  | 1.34  | 25       |      |
| 1,4-Dichlorobenzene       | 5.4              | 0.20              | 5           | 0                        | 108  | 70       | 130       | 5.48                  | 1.47  | 25       |      |
| 1,4-Dioxane               | 5.41             | 1.0               | 5           | 0                        | 108  | 70       | 130       | 5.48                  | 1.29  | 25       |      |
| 2-Butanone                | 5.57             | 0.50              | 5           | 0                        | 111  | 70       | 130       | 5.9                   | 5.75  | 25       |      |
| 2-Hexanone                | 6.27             | 1.0               | 5           | 0                        | 125  | 70       | 130       | 6.68                  | 6.33  | 25       |      |
| 4-Ethyltoluene            | 5.51             | 0.20              | 5           | 0                        | 110  | 70       | 130       | 5.58                  | 1.26  | 25       |      |
| 4-Methyl-2-pentanone      | 6.1              | 1.0               | 5           | 0                        | 122  | 70       | 130       | 6.3                   | 3.23  | 25       |      |
| Acetone                   | 4.71             | 2.0               | 5           | 0                        | 94.2 | 70       | 130       | 4.8                   | 1.89  | 25       | *    |
| Benzene                   | 5.58             | 0.20              | 5           | 0                        | 112  | 70       | 130       | 5.57                  | 0.179 | 25       |      |
| Benzyl chloride           | 5.26             | 0.50              | 5           | 0                        | 105  | 70       | 130       | 5.39                  | 2.44  | 25       |      |
| Bromodichloromethane      | 5.71             | 0.20              | 5           | 0                        | 114  | 70       | 130       | 5.7                   | 0.175 | 25       |      |
| Bromoform                 | 5.23             | 0.50              | 5           | 0                        | 105  | 70       | 130       | 5.3                   | 1.33  | 25       |      |
| Bromomethane              | 4.5              | 0.50              | 5           | 0                        | 90   | 70       | 130       | 4.54                  | 0.885 | 25       |      |
| Carbon disulfide          | 4.83             | 0.20              | 5           | 0                        | 96.6 | 70       | 130       | 4.83                  | 0     | 25       |      |
| Carbon tetrachloride      | 6.05             | 0.20              | 5           | 0                        | 121  | 70       | 130       | 5.95                  | 1.67  | 25       |      |
| Chlorobenzene             | 5.28             | 0.20              | 5           | 0                        | 106  | 70       | 130       | 5.31                  | 0.567 | 25       |      |
| Chloroethane              | 5.98             | 0.20              | 5           | 0                        | 120  | 70       | 130       | 5.93                  | 0.840 | 25       |      |
| Chloroform                | 5.72             | 0.20              | 5           | 0                        | 114  | 70       | 130       | 5.76                  | 0.697 | 25       |      |

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 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.

**Work Order:** 12080703

**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82878

| Sample ID: LCSD082812-5   | SampType: LCSD   | TestCode: TO_15A+ | Units: ppbv | Prep Date:               |      |          |           | Run ID: VOA-5_120828A |       |          |      |
|---------------------------|------------------|-------------------|-------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15     |             | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2229711        |       |          |      |
| Analyte                   | Result           | PQL               | SPK value   | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| Chloromethane             | 4.87             | 0.50              | 5           | 0                        | 97.4 | 70       | 130       | 4.87                  | 0     | 25       |      |
| cis-1,2-Dichloroethene    | 5.35             | 0.20              | 5           | 0                        | 107  | 70       | 130       | 5.42                  | 1.30  | 25       |      |
| cis-1,3-Dichloropropene   | 6.19             | 0.20              | 5           | 0                        | 124  | 70       | 130       | 6.16                  | 0.486 | 25       |      |
| Cyclohexane               | 6.01             | 0.20              | 5           | 0                        | 120  | 70       | 130       | 6.03                  | 0.332 | 25       |      |
| Dibromochloromethane      | 5.55             | 0.20              | 5           | 0                        | 111  | 70       | 130       | 5.59                  | 0.718 | 25       |      |
| Dichlorodifluoromethane   | 4.75             | 0.20              | 5           | 0                        | 95   | 70       | 130       | 4.83                  | 1.67  | 25       |      |
| Ethyl acetate             | 6.45             | 0.20              | 5           | 0                        | 129  | 70       | 130       | 6.59                  | 2.15  | 25       |      |
| Ethylbenzene              | 5.47             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 5.41                  | 1.10  | 25       |      |
| Freon-113                 | 4.52             | 0.20              | 5           | 0                        | 90.4 | 70       | 130       | 4.55                  | 0.662 | 25       |      |
| Freon-114                 | 4.84             | 1.0               | 5           | 0.05                     | 95.8 | 70       | 130       | 4.88                  | 0.823 | 25       |      |
| Heptane                   | 7.16             | 0.20              | 5           | 0                        | 143  | 70       | 130       | 7.13                  | 0.420 | 25       | S    |
| Hexachlorobutadiene       | 4.28             | 0.20              | 5           | 0                        | 85.6 | 70       | 130       | 4.49                  | 4.79  | 25       |      |
| Hexane                    | 6.94             | 0.50              | 5           | 0                        | 139  | 70       | 130       | 6.91                  | 0.433 | 25       | S    |
| Isopropyl Alcohol         | 6.05             | 1.0               | 5           | 0                        | 121  | 70       | 130       | 6.09                  | 0.659 | 25       |      |
| m,p-Xylene                | 11.13            | 0.40              | 10          | 0                        | 111  | 70       | 130       | 11.15                 | 0.180 | 25       |      |
| Methyl tert-butyl ether   | 5.44             | 0.20              | 5           | 0                        | 109  | 70       | 130       | 5.54                  | 1.82  | 25       |      |
| Methylene chloride        | 4.66             | 2.0               | 5           | 0                        | 93.2 | 70       | 130       | 4.69                  | 0.642 | 25       |      |
| o-Xylene                  | 5.61             | 0.20              | 5           | 0                        | 112  | 70       | 130       | 5.67                  | 1.06  | 25       |      |
| Propene                   | 5.62             | 2.0               | 5           | 0                        | 112  | 70       | 130       | 5.6                   | 0.357 | 25       |      |
| Styrene                   | 6.03             | 0.20              | 5           | 0                        | 121  | 70       | 130       | 6.09                  | 0.990 | 25       |      |
| Tetrachloroethene         | 4.78             | 0.20              | 5           | 0                        | 95.6 | 70       | 130       | 4.79                  | 0.209 | 25       |      |
| Tetrahydrofuran           | 6.28             | 0.50              | 5           | 0                        | 126  | 70       | 130       | 6.44                  | 2.52  | 25       |      |
| Toluene                   | 5.6              | 0.20              | 5           | 0                        | 112  | 70       | 130       | 5.57                  | 0.537 | 25       |      |
| trans-1,2-Dichloroethene  | 5.31             | 0.20              | 5           | 0                        | 106  | 70       | 130       | 5.31                  | 0     | 25       |      |
| trans-1,3-Dichloropropene | 4.77             | 0.20              | 5           | 0                        | 95.4 | 70       | 130       | 4.76                  | 0.210 | 25       |      |
| Trichloroethene           | 5.21             | 0.20              | 5           | 0                        | 104  | 70       | 130       | 5.23                  | 0.383 | 25       |      |
| Trichlorofluoromethane    | 4.53             | 0.20              | 5           | 0                        | 90.6 | 70       | 130       | 4.58                  | 1.10  | 25       |      |
| Vinyl acetate             | 5.38             | 2.0               | 5           | 0                        | 108  | 70       | 130       | 5.48                  | 1.84  | 25       |      |
| Vinyl chloride            | 5.18             | 0.20              | 5           | 0                        | 104  | 70       | 130       | 5.29                  | 2.10  | 25       |      |
| Xylenes, Total            | 16.73            | 0.60              | 15          | 0                        | 112  | 70       | 130       | 16.81                 | 0.477 | 25       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82878

| Sample ID: MB082812-5     | SampType: MBLK   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          | Run ID: VOA-5_120828A |             |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15      |              | Analysis Date: 8/28/2012 |      |          | SeqNo: 2230500        |             |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| 1,1,2,2-Tetrachloroethane | ND               | 1.4                |              |                          |      |          |                       |             |      |          |      |
| 1,1,2-Trichloroethane     | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethane        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,1-Dichloroethene        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trichlorobenzene    | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 1,2,4-Trimethylbenzene    | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dibromoethane         | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloroethane        | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| 1,2-Dichloropropane       | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| 1,3,5-Trimethylbenzene    | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 1,3-Butadiene             | ND               | 0.40               |              |                          |      |          |                       |             |      |          |      |
| 1,3-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,4-Dichlorobenzene       | ND               | 1.2                |              |                          |      |          |                       |             |      |          |      |
| 1,4-Dioxane               | ND               | 1.8                |              |                          |      |          |                       |             |      |          |      |
| 2-Butanone                | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| 2-Hexanone                | ND               | 4.1                |              |                          |      |          |                       |             |      |          |      |
| 4-Ethyltoluene            | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| 4-Methyl-2-pentanone      | ND               | 4.1                |              |                          |      |          |                       |             |      |          |      |
| Acetone                   | ND               | 4.8                |              |                          |      |          |                       |             |      |          | *    |
| Benzene                   | ND               | 0.60               |              |                          |      |          |                       |             |      |          |      |
| Benzyl chloride           | ND               | 2.6                |              |                          |      |          |                       |             |      |          |      |
| Bromodichloromethane      | ND               | 1.3                |              |                          |      |          |                       |             |      |          |      |
| Bromoform                 | ND               | 5.2                |              |                          |      |          |                       |             |      |          |      |
| Bromomethane              | ND               | 1.9                |              |                          |      |          |                       |             |      |          |      |
| Carbon disulfide          | ND               | 0.60               |              |                          |      |          |                       |             |      |          |      |
| Carbon tetrachloride      | ND               | 1.3                |              |                          |      |          |                       |             |      |          |      |
| Chlorobenzene             | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Chloroethane              | ND               | 0.50               |              |                          |      |          |                       |             |      |          |      |
| Chloroform                | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R82878

| Sample ID: MB082812-5     | SampType: MBLK   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          | Run ID: VOA-5_120828A |             |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------------------|-------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15      |              | Analysis Date: 8/28/2012 |      |          | SeqNo: 2230500        |             |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit             | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloromethane             | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| cis-1,2-Dichloroethene    | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| cis-1,3-Dichloropropene   | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Cyclohexane               | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Dibromochloromethane      | ND               | 1.7                |              |                          |      |          |                       |             |      |          |      |
| Dichlorodifluoromethane   | ND               | 1.0                |              |                          |      |          |                       |             |      |          |      |
| Ethyl acetate             | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Ethylbenzene              | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Freon-113                 | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| Freon-114                 | 0.3495           | 7.0                |              |                          |      |          |                       |             |      |          | J    |
| Heptane                   | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| Hexachlorobutadiene       | ND               | 2.1                |              |                          |      |          |                       |             |      |          |      |
| Hexane                    | ND               | 1.8                |              |                          |      |          |                       |             |      |          |      |
| Isopropyl Alcohol         | ND               | 2.5                |              |                          |      |          |                       |             |      |          |      |
| m,p-Xylene                | ND               | 1.7                |              |                          |      |          |                       |             |      |          |      |
| Methyl tert-butyl ether   | ND               | 0.70               |              |                          |      |          |                       |             |      |          |      |
| Methylene chloride        | ND               | 6.9                |              |                          |      |          |                       |             |      |          |      |
| o-Xylene                  | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Propene                   | ND               | 3.4                |              |                          |      |          |                       |             |      |          |      |
| Styrene                   | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Tetrachloroethene         | ND               | 1.4                |              |                          |      |          |                       |             |      |          |      |
| Tetrahydrofuran           | ND               | 1.5                |              |                          |      |          |                       |             |      |          |      |
| Toluene                   | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| trans-1,2-Dichloroethene  | ND               | 0.80               |              |                          |      |          |                       |             |      |          |      |
| trans-1,3-Dichloropropene | ND               | 0.90               |              |                          |      |          |                       |             |      |          |      |
| Trichloroethene           | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| Trichlorofluoromethane    | ND               | 1.1                |              |                          |      |          |                       |             |      |          |      |
| Vinyl acetate             | ND               | 7.0                |              |                          |      |          |                       |             |      |          |      |
| Vinyl chloride            | ND               | 0.50               |              |                          |      |          |                       |             |      |          |      |
| Xylenes, Total            | ND               | 2.6                |              |                          |      |          |                       |             |      |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
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B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82878**

| Sample ID: LCS082812-5    | SampType: LCS    | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120828A |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15      |              | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2230501        |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 27.06            | 1.1                | 27.28        | 0                        | 99.2 | 70       | 130       | 0                     | 0    |          |      |
| 1,1,2,2-Tetrachloroethane | 47.31            | 1.4                | 34.34        | 0                        | 138  | 70       | 130       | 0                     | 0    |          | S    |
| 1,1,2-Trichloroethane     | 33.88            | 1.1                | 27.28        | 0                        | 124  | 70       | 130       | 0                     | 0    |          |      |
| 1,1-Dichloroethane        | 24.16            | 0.80               | 20.24        | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| 1,1-Dichloroethene        | 22.56            | 0.80               | 19.82        | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |
| 1,2,4-Trichlorobenzene    | 39.78            | 1.5                | 37.11        | 0                        | 107  | 70       | 130       | 0                     | 0    |          |      |
| 1,2,4-Trimethylbenzene    | 27.18            | 1.0                | 24.58        | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dibromoethane         | 43.57            | 1.5                | 38.42        | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichlorobenzene       | 33.85            | 1.2                | 30.06        | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloroethane        | 26.03            | 0.80               | 20.24        | 0                        | 129  | 70       | 130       | 0                     | 0    |          |      |
| 1,2-Dichloropropane       | 27.91            | 0.90               | 23.11        | 0                        | 121  | 70       | 130       | 0                     | 0    |          |      |
| 1,3,5-Trimethylbenzene    | 29.3             | 1.0                | 24.58        | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| 1,3-Butadiene             | 12.21            | 0.40               | 11.06        | 0                        | 110  | 70       | 130       | 0                     | 0    |          |      |
| 1,3-Dichlorobenzene       | 31.62            | 1.2                | 30.06        | 0                        | 105  | 70       | 130       | 0                     | 0    |          |      |
| 1,4-Dichlorobenzene       | 32.95            | 1.2                | 30.06        | 0                        | 110  | 70       | 130       | 0                     | 0    |          |      |
| 1,4-Dioxane               | 19.75            | 1.8                | 18.02        | 0                        | 110  | 70       | 130       | 0                     | 0    |          |      |
| 2-Butanone                | 17.4             | 1.5                | 14.75        | 0                        | 118  | 70       | 130       | 0                     | 0    |          |      |
| 2-Hexanone                | 27.36            | 4.1                | 20.48        | 0                        | 134  | 70       | 130       | 0                     | 0    |          | S    |
| 4-Ethyltoluene            | 27.43            | 1.0                | 24.58        | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| 4-Methyl-2-pentanone      | 25.81            | 4.1                | 20.48        | 0                        | 126  | 70       | 130       | 0                     | 0    |          |      |
| Acetone                   | 11.4             | 4.8                | 11.88        | 0                        | 96   | 70       | 130       | 0                     | 0    |          | *    |
| Benzene                   | 17.79            | 0.60               | 15.97        | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| Benzyl chloride           | 27.9             | 2.6                | 25.89        | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| Bromodichloromethane      | 38.19            | 1.3                | 33.5         | 0                        | 114  | 70       | 130       | 0                     | 0    |          |      |
| Bromoform                 | 54.78            | 5.2                | 51.68        | 0                        | 106  | 70       | 130       | 0                     | 0    |          |      |
| Bromomethane              | 17.63            | 1.9                | 19.42        | 0                        | 90.8 | 70       | 130       | 0                     | 0    |          |      |
| Carbon disulfide          | 15.04            | 0.60               | 15.57        | 0                        | 96.6 | 70       | 130       | 0                     | 0    |          |      |
| Carbon tetrachloride      | 37.43            | 1.3                | 31.46        | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| Chlorobenzene             | 24.45            | 0.90               | 23.02        | 0                        | 106  | 70       | 130       | 0                     | 0    |          |      |
| Chloroethane              | 15.65            | 0.50               | 13.19        | 0                        | 119  | 70       | 130       | 0                     | 0    |          |      |
| Chloroform                | 28.12            | 1.0                | 24.41        | 0                        | 115  | 70       | 130       | 0                     | 0    |          |      |

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**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82878**

| Sample ID: LCS082812-5    | SampType: LCS    | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120828A |      |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15      |              | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2230501        |      |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD | RPDLimit | Qual |
| Chloromethane             | 10.06            | 1.0                | 10.33        | 0                        | 97.4 | 70       | 130       | 0                     | 0    |          |      |
| cis-1,2-Dichloroethene    | 21.49            | 0.80               | 19.82        | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| cis-1,3-Dichloropropene   | 27.96            | 0.90               | 22.69        | 0                        | 123  | 70       | 130       | 0                     | 0    |          |      |
| Cyclohexane               | 20.76            | 0.70               | 17.21        | 0                        | 121  | 70       | 130       | 0                     | 0    |          |      |
| Dibromochloromethane      | 47.62            | 1.7                | 42.59        | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| Dichlorodifluoromethane   | 23.89            | 1.0                | 24.73        | 0                        | 96.6 | 70       | 130       | 0                     | 0    |          |      |
| Ethyl acetate             | 23.75            | 0.70               | 18.02        | 0                        | 132  | 70       | 130       | 0                     | 0    |          | S    |
| Ethylbenzene              | 23.49            | 0.90               | 21.71        | 0                        | 108  | 70       | 130       | 0                     | 0    |          |      |
| Freon-113                 | 34.87            | 1.5                | 38.32        | 0                        | 91   | 70       | 130       | 0                     | 0    |          |      |
| Freon-114                 | 34.11            | 7.0                | 34.95        | 0.3495                   | 96.6 | 70       | 130       | 0                     | 0    |          |      |
| Heptane                   | 29.22            | 0.80               | 20.49        | 0                        | 143  | 70       | 130       | 0                     | 0    |          | S    |
| Hexachlorobutadiene       | 47.89            | 2.1                | 53.33        | 0                        | 89.8 | 70       | 130       | 0                     | 0    |          |      |
| Hexane                    | 24.36            | 1.8                | 17.62        | 0                        | 138  | 70       | 130       | 0                     | 0    |          | S    |
| Isopropyl Alcohol         | 14.97            | 2.5                | 12.29        | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| m,p-Xylene                | 48.41            | 1.7                | 43.42        | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| Methyl tert-butyl ether   | 19.97            | 0.70               | 18.03        | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| Methylene chloride        | 16.29            | 6.9                | 17.37        | 0                        | 93.8 | 70       | 130       | 0                     | 0    |          |      |
| o-Xylene                  | 24.62            | 0.90               | 21.71        | 0                        | 113  | 70       | 130       | 0                     | 0    |          |      |
| Propene                   | 9.638            | 3.4                | 8.605        | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |
| Styrene                   | 25.94            | 0.90               | 21.3         | 0                        | 122  | 70       | 130       | 0                     | 0    |          |      |
| Tetrachloroethene         | 32.49            | 1.4                | 33.91        | 0                        | 95.8 | 70       | 130       | 0                     | 0    |          |      |
| Tetrahydrofuran           | 18.99            | 1.5                | 14.75        | 0                        | 129  | 70       | 130       | 0                     | 0    |          |      |
| Toluene                   | 20.99            | 0.80               | 18.84        | 0                        | 111  | 70       | 130       | 0                     | 0    |          |      |
| trans-1,2-Dichloroethene  | 21.05            | 0.80               | 19.82        | 0                        | 106  | 70       | 130       | 0                     | 0    |          |      |
| trans-1,3-Dichloropropene | 21.6             | 0.90               | 22.69        | 0                        | 95.2 | 70       | 130       | 0                     | 0    |          |      |
| Trichloroethene           | 28.11            | 1.1                | 26.87        | 0                        | 105  | 70       | 130       | 0                     | 0    |          |      |
| Trichlorofluoromethane    | 25.73            | 1.1                | 28.09        | 0                        | 91.6 | 70       | 130       | 0                     | 0    |          |      |
| Vinyl acetate             | 19.3             | 7.0                | 17.61        | 0                        | 110  | 70       | 130       | 0                     | 0    |          |      |
| Vinyl chloride            | 13.52            | 0.50               | 12.78        | 0                        | 106  | 70       | 130       | 0                     | 0    |          |      |
| Xylenes, Total            | 72.99            | 2.6                | 65.13        | 0                        | 112  | 70       | 130       | 0                     | 0    |          |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82878**

| Sample ID: LCSD082812-5   | SampType: LCSD   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120828A |       |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15      |              | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2230502        |       |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| 1,1,1-Trichloroethane     | 26.9             | 1.1                | 27.28        | 0                        | 98.6 | 70       | 130       | 27.06                 | 0.607 | 25       |      |
| 1,1,2,2-Tetrachloroethane | 47.11            | 1.4                | 34.34        | 0                        | 137  | 70       | 130       | 47.31                 | 0.436 | 25       | S    |
| 1,1,2-Trichloroethane     | 33.83            | 1.1                | 27.28        | 0                        | 124  | 70       | 130       | 33.88                 | 0.161 | 25       |      |
| 1,1-Dichloroethane        | 23.96            | 0.80               | 20.24        | 0                        | 118  | 70       | 130       | 24.16                 | 0.841 | 25       |      |
| 1,1-Dichloroethene        | 22.32            | 0.80               | 19.82        | 0                        | 113  | 70       | 130       | 22.56                 | 1.06  | 25       |      |
| 1,2,4-Trichlorobenzene    | 37.77            | 1.5                | 37.11        | 0                        | 102  | 70       | 130       | 39.78                 | 5.17  | 25       |      |
| 1,2,4-Trimethylbenzene    | 26.69            | 1.0                | 24.58        | 0                        | 109  | 70       | 130       | 27.18                 | 1.82  | 25       |      |
| 1,2-Dibromoethane         | 43.57            | 1.5                | 38.42        | 0                        | 113  | 70       | 130       | 43.57                 | 0     | 25       |      |
| 1,2-Dichlorobenzene       | 33.37            | 1.2                | 30.06        | 0                        | 111  | 70       | 130       | 33.85                 | 1.43  | 25       |      |
| 1,2-Dichloroethane        | 25.86            | 0.80               | 20.24        | 0                        | 128  | 70       | 130       | 26.03                 | 0.624 | 25       |      |
| 1,2-Dichloropropane       | 28.1             | 0.90               | 23.11        | 0                        | 122  | 70       | 130       | 27.91                 | 0.660 | 25       |      |
| 1,3,5-Trimethylbenzene    | 28.66            | 1.0                | 24.58        | 0                        | 117  | 70       | 130       | 29.3                  | 2.21  | 25       |      |
| 1,3-Butadiene             | 12.12            | 0.40               | 11.06        | 0                        | 110  | 70       | 130       | 12.21                 | 0.727 | 25       |      |
| 1,3-Dichlorobenzene       | 31.2             | 1.2                | 30.06        | 0                        | 104  | 70       | 130       | 31.62                 | 1.34  | 25       |      |
| 1,4-Dichlorobenzene       | 32.47            | 1.2                | 30.06        | 0                        | 108  | 70       | 130       | 32.95                 | 1.47  | 25       |      |
| 1,4-Dioxane               | 19.5             | 1.8                | 18.02        | 0                        | 108  | 70       | 130       | 19.75                 | 1.29  | 25       |      |
| 2-Butanone                | 16.43            | 1.5                | 14.75        | 0                        | 111  | 70       | 130       | 17.4                  | 5.75  | 25       |      |
| 2-Hexanone                | 25.69            | 4.1                | 20.48        | 0                        | 125  | 70       | 130       | 27.36                 | 6.33  | 25       |      |
| 4-Ethyltoluene            | 27.09            | 1.0                | 24.58        | 0                        | 110  | 70       | 130       | 27.43                 | 1.26  | 25       |      |
| 4-Methyl-2-pentanone      | 24.99            | 4.1                | 20.48        | 0                        | 122  | 70       | 130       | 25.81                 | 3.23  | 25       |      |
| Acetone                   | 11.19            | 4.8                | 11.88        | 0                        | 94.2 | 70       | 130       | 11.4                  | 1.89  | 25       | *    |
| Benzene                   | 17.83            | 0.60               | 15.97        | 0                        | 112  | 70       | 130       | 17.79                 | 0.179 | 25       |      |
| Benzyl chloride           | 27.23            | 2.6                | 25.89        | 0                        | 105  | 70       | 130       | 27.9                  | 2.44  | 25       |      |
| Bromodichloromethane      | 38.26            | 1.3                | 33.5         | 0                        | 114  | 70       | 130       | 38.19                 | 0.175 | 25       |      |
| Bromoform                 | 54.06            | 5.2                | 51.68        | 0                        | 105  | 70       | 130       | 54.78                 | 1.33  | 25       |      |
| Bromomethane              | 17.47            | 1.9                | 19.42        | 0                        | 90   | 70       | 130       | 17.63                 | 0.885 | 25       |      |
| Carbon disulfide          | 15.04            | 0.60               | 15.57        | 0                        | 96.6 | 70       | 130       | 15.04                 | 0     | 25       |      |
| Carbon tetrachloride      | 38.06            | 1.3                | 31.46        | 0                        | 121  | 70       | 130       | 37.43                 | 1.67  | 25       |      |
| Chlorobenzene             | 24.31            | 0.90               | 23.02        | 0                        | 106  | 70       | 130       | 24.45                 | 0.567 | 25       |      |
| Chloroethane              | 15.78            | 0.50               | 13.19        | 0                        | 120  | 70       | 130       | 15.65                 | 0.840 | 25       |      |
| Chloroform                | 27.93            | 1.0                | 24.41        | 0                        | 114  | 70       | 130       | 28.12                 | 0.697 | 25       |      |

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 E - Value above quantitation range

**CLIENT:** Terracon Consultants, Inc.  
**Work Order:** 12080703  
**Project:** A2107017-7A, DOE-Kimball, Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R82878**

| Sample ID: LCSD082812-5   | SampType: LCSD   | TestCode: TO_15UG+ | Units: µg/m³ | Prep Date:               |      |          |           | Run ID: VOA-5_120828A |       |          |      |
|---------------------------|------------------|--------------------|--------------|--------------------------|------|----------|-----------|-----------------------|-------|----------|------|
| Client ID: ZZZZZ          | Batch ID: R82878 | TestNo: TO-15      |              | Analysis Date: 8/28/2012 |      |          |           | SeqNo: 2230502        |       |          |      |
| Analyte                   | Result           | PQL                | SPK value    | SPK Ref Val              | %REC | LowLimit | HighLimit | RPD Ref Val           | %RPD  | RPDLimit | Qual |
| Chloromethane             | 10.06            | 1.0                | 10.33        | 0                        | 97.4 | 70       | 130       | 10.06                 | 0     | 25       |      |
| cis-1,2-Dichloroethene    | 21.21            | 0.80               | 19.82        | 0                        | 107  | 70       | 130       | 21.49                 | 1.30  | 25       |      |
| cis-1,3-Dichloropropene   | 28.09            | 0.90               | 22.69        | 0                        | 124  | 70       | 130       | 27.96                 | 0.486 | 25       |      |
| Cyclohexane               | 20.69            | 0.70               | 17.21        | 0                        | 120  | 70       | 130       | 20.76                 | 0.332 | 25       |      |
| Dibromochloromethane      | 47.28            | 1.7                | 42.59        | 0                        | 111  | 70       | 130       | 47.62                 | 0.718 | 25       |      |
| Dichlorodifluoromethane   | 23.49            | 1.0                | 24.73        | 0                        | 95   | 70       | 130       | 23.89                 | 1.67  | 25       |      |
| Ethyl acetate             | 23.24            | 0.70               | 18.02        | 0                        | 129  | 70       | 130       | 23.75                 | 2.15  | 25       |      |
| Ethylbenzene              | 23.75            | 0.90               | 21.71        | 0                        | 109  | 70       | 130       | 23.49                 | 1.10  | 25       |      |
| Freon-113                 | 34.64            | 1.5                | 38.32        | 0                        | 90.4 | 70       | 130       | 34.87                 | 0.662 | 25       |      |
| Freon-114                 | 33.83            | 7.0                | 34.95        | 0.3495                   | 95.8 | 70       | 130       | 34.11                 | 0.823 | 25       |      |
| Heptane                   | 29.34            | 0.80               | 20.49        | 0                        | 143  | 70       | 130       | 29.22                 | 0.420 | 25       | S    |
| Hexachlorobutadiene       | 45.65            | 2.1                | 53.33        | 0                        | 85.6 | 70       | 130       | 47.89                 | 4.79  | 25       |      |
| Hexane                    | 24.46            | 1.8                | 17.62        | 0                        | 139  | 70       | 130       | 24.36                 | 0.433 | 25       | S    |
| Isopropyl Alcohol         | 14.87            | 2.5                | 12.29        | 0                        | 121  | 70       | 130       | 14.97                 | 0.659 | 25       |      |
| m,p-Xylene                | 48.33            | 1.7                | 43.42        | 0                        | 111  | 70       | 130       | 48.41                 | 0.180 | 25       |      |
| Methyl tert-butyl ether   | 19.61            | 0.70               | 18.03        | 0                        | 109  | 70       | 130       | 19.97                 | 1.82  | 25       |      |
| Methylene chloride        | 16.19            | 6.9                | 17.37        | 0                        | 93.2 | 70       | 130       | 16.29                 | 0.642 | 25       |      |
| o-Xylene                  | 24.36            | 0.90               | 21.71        | 0                        | 112  | 70       | 130       | 24.62                 | 1.06  | 25       |      |
| Propene                   | 9.672            | 3.4                | 8.605        | 0                        | 112  | 70       | 130       | 9.638                 | 0.357 | 25       |      |
| Styrene                   | 25.69            | 0.90               | 21.3         | 0                        | 121  | 70       | 130       | 25.94                 | 0.990 | 25       |      |
| Tetrachloroethene         | 32.42            | 1.4                | 33.91        | 0                        | 95.6 | 70       | 130       | 32.49                 | 0.209 | 25       |      |
| Tetrahydrofuran           | 18.52            | 1.5                | 14.75        | 0                        | 126  | 70       | 130       | 18.99                 | 2.52  | 25       |      |
| Toluene                   | 21.1             | 0.80               | 18.84        | 0                        | 112  | 70       | 130       | 20.99                 | 0.537 | 25       |      |
| trans-1,2-Dichloroethene  | 21.05            | 0.80               | 19.82        | 0                        | 106  | 70       | 130       | 21.05                 | 0     | 25       |      |
| trans-1,3-Dichloropropene | 21.65            | 0.90               | 22.69        | 0                        | 95.4 | 70       | 130       | 21.6                  | 0.210 | 25       |      |
| Trichloroethene           | 28               | 1.1                | 26.87        | 0                        | 104  | 70       | 130       | 28.11                 | 0.383 | 25       |      |
| Trichlorofluoromethane    | 25.45            | 1.1                | 28.09        | 0                        | 90.6 | 70       | 130       | 25.73                 | 1.10  | 25       |      |
| Vinyl acetate             | 18.94            | 7.0                | 17.61        | 0                        | 108  | 70       | 130       | 19.3                  | 1.84  | 25       |      |
| Vinyl chloride            | 13.24            | 0.50               | 12.78        | 0                        | 104  | 70       | 130       | 13.52                 | 2.10  | 25       |      |
| Xylenes, Total            | 72.64            | 2.6                | 65.13        | 0                        | 112  | 70       | 130       | 72.99                 | 0.477 | 25       |      |

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 \* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

Table 1: Soil Analytical Results  
 Limited Site Investigation  
 Proposed Kimbal Park  
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| Sample Location/Identification                    | TB-1                              | TB-2      | TB-2-Dup  | TB-3      | TB-4      | TB-5      | TB-5-Dup  | Tier 1 Soil Remediation Objectives for Residential Properties |                      |            |         | Soil Component of the Groundwater Ingestion Route Values |      |         |
|---|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|---|----------------------|------------|---------|--|------|---------|
|   |                                   |           |           |           |           |           |           | Occupants   | Construction Workers | Background |         |  |      |         |
| Date Collected                                    | 8/20/2012                         | 8/20/2012 | 8/20/2012 | 8/21/2012 | 8/21/2012 | 8/21/2012 | 8/21/2012 | Ingestion   | Inhalation           | Inhalation | Chicago | Class II   |      |         |
| Units   |                                   |           |           |           |           |           |           |   |                      |            |         |  |      |         |
| <b>Volatile Organic Analytical Parameters</b>     |                                   |           |           |           |           |           |           |   |                      |            |         |  |      |         |
| 74-87-3   | Chloromethane                     | mg/kg     | < 0.0098  | < 0.0087  | < 0.0094  | < 0.0084  | < 0.0095  | --  | --                   | 310        | 110     | 1.1  | ---  | 0.68    |
| 74-83-9   | Bromomethane                      | mg/kg     | < 0.0098  | < 0.0087  | < 0.0094  | < 0.0084  | < 0.0095  | --  | --                   | 110        | 10      | 3.9  | ---  | 1.2     |
| 75-01-4   | Vinyl Chloride                    | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 0.46       | 0.28    | ---  | ---  | 0.07    |
| 75-00-3   | Chloroethane                      | mg/kg     | < 0.0098  | < 0.0087  | < 0.0094  | < 0.0084  | < 0.0095  | --  | --                   | 31000      | 1500    | 94   | ---  | 70      |
| 75-09-2   | Methylene Chloride                | mg/kg     | < 0.0098  | < 0.0087  | < 0.0094  | < 0.0084  | < 0.0095  | --  | --                   | 85         | 13      | ---  | ---  | 0.2     |
| 67-64-1   | Acetone                           | mg/kg     | < 0.073   | < 0.065   | < 0.07    | < 0.063   | < 0.071   | --  | --                   | 70000      | 100000  | ---  | ---  | 25      |
| 75-15-0   | Carbon Disulfide                  | mg/kg     | < 0.049   | < 0.043   | < 0.047   | < 0.042   | < 0.047   | --  | --                   | 7800       | 720     | 9  | ---  | 160     |
| 75-35-4   | 1,1-Dichloroethene                | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 3900       | 290     | 3  | ---  | 0.3     |
| 75-34-3   | 1,1-Dichloroethane                | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 7800       | 1300    | 130  | ---  | 110     |
| 156-59-2  | cis-1,2-Dichloroethene            | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 780        | 1200    | ---  | ---  | 1.1     |
| 156-60-5  | trans-1,2-Dichloroethene          | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 1600       | 3100    | ---  | ---  | 3.4     |
| 67-66-3   | Chloroform                        | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 100        | 0.3     | ---  | ---  | 2.9     |
| 107-06-2  | 1,2-Dichloroethane                | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 7          | 0.4     | ---  | ---  | 0.1     |
| 78-93-3   | 2-Butanone                        | mg/kg     | < 0.073   | < 0.065   | < 0.07    | < 0.063   | < 0.071   | --  | --                   | 47000      | 25000   | 710  | ---  | 17      |
| 71-55-6   | 1,1,1-Trichloroethane             | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | ---        | 1200    | ---  | ---  | 9.6     |
| 56-23-5   | Carbon Tetrachloride              | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 5          | 0.3     | ---  | ---  | 0.33    |
| 75-27-4   | Bromodichloromethane              | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 10         | 3000    | ---  | ---  | 0.6     |
| 78-87-5   | 1,2-Dichloropropane               | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 9          | 15      | 0.5  | ---  | 0.15    |
| 542-75-6  | 1,3-Dichloropropene (cis + trans) | mg/kg     | < 0.002   | < 0.0017  | < 0.0019  | < 0.0017  | < 0.0019  | --  | --                   | 6.4        | 1.1     | 0.39   | ---  | 0.02    |
| 79-01-6   | Trichloroethene                   | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0049  | --  | --                   | 58         | 5       | ---  | ---  | 0.3     |
| 124-48-1  | Dibromochloromethane              | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 1600       | 1300    | ---  | ---  | 0.4     |
| 79-00-5   | 1,1,2-Trichloroethane             | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 310        | 1800    | ---  | ---  | 0.3     |
| 71-43-2   | Benzene                           | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 12         | 0.8     | ---  | ---  | 0.17    |
| 75-25-2   | Bromoform                         | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 81         | 53      | ---  | ---  | 0.8     |
| 1634-04-4   | Methyl Tertiary-Butyl Ether       | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 780        | 8800    | 140  | ---  | 0.32    |
| 108-10-1  | 4-Methyl-2-pentanone              | mg/kg     | < 0.02    | < 0.017   | < 0.019   | < 0.017   | < 0.019   | --  | --                   | ---        | 3100    | 340  | ---  | 2.5     |
| 591-78-6  | 2-Hexanone                        | mg/kg     | < 0.02    | < 0.017   | < 0.019   | < 0.017   | < 0.019   | --  | --                   | 3100       | 70      | 0.72   | ---  | 1.3     |
| 127-18-4  | Tetrachloroethene                 | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 12         | 11      | ---  | ---  | 0.3     |
| 108-88-3  | Toluene                           | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 16000      | 650     | 42   | ---  | 29      |
| 79-34-5   | 1,1,2,2-Tetrachloroethane         | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 4700       | 2000    | ---  | ---  | 3.3     |
| 108-90-7  | Chlorobenzene                     | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 1600       | 130     | 1.3  | ---  | 6.5     |
| 100-41-4  | Ethylbenzene                      | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 7800       | 400     | 58   | ---  | 19      |
| 100-42-5  | Styrene                           | mg/kg     | < 0.0049  | < 0.0043  | < 0.0047  | < 0.0042  | < 0.0047  | --  | --                   | 16000      | 1500    | 430  | ---  | 18      |
| 1330-20-7   | Xylenes (total)                   | mg/kg     | < 0.015   | < 0.013   | < 0.014   | < 0.013   | < 0.014   | --  | --                   | 16000      | 320     | 5.6  | ---  | 150     |
| <b>Semivolatile Organic Analytical Parameters</b> |                                   |           |           |           |           |           |           |   |                      |            |         |  |      |         |
| 108-95-2  | Phenol                            | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 23000      | ---     | ---  | ---  | 100     |
| 111-44-4  | bis(2-Chloroethyl) ether          | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 0.6        | 0.2     | ---  | ---  | 0.0004  |
| 95-57-8   | 2-Chlorophenol                    | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 390        | 53000   | ---  | ---  | 4       |
| 95-50-1   | 1,2-Dichlorobenzene               | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 7000       | 560     | 310  | ---  | 43      |
| 541-73-1  | 1,3-Dichlorobenzene               | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 70         | 570     | ---  | ---  | 1       |
| 106-46-7  | 1,4-Dichlorobenzene               | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | ---        | 11000   | 340  | ---  | 11      |
| 95-48-7   | 2-Methylphenol                    | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 3900       | ---     | ---  | ---  | 15      |
| 108-60-1  | 2,2'-oxybis (1-chloropropane)     | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 3100       | 1300    | ---  | ---  | 2.4     |
| 106-44-5  | 4-Methylphenol                    | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 390        | ---     | ---  | ---  | 0.2     |
| 621-64-7  | N-Nitroso-di-n-propylamine        | mg/kg     | --        | --        | --        | --        | --        | < 0.041   | < 0.039              | 0.09       | ---     | ---  | ---  | 0.00005 |
| 67-72-1   | Hexachloroethane                  | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 78         | ---     | ---  | ---  | 2.6     |
| 98-95-3   | Nitrobenzene                      | mg/kg     | --        | --        | --        | --        | --        | < 0.041   | < 0.039              | 39         | 92      | 9.4  | ---  | 0.1     |
| 78-59-1   | Isophorone                        | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 15600      | 4600    | ---  | ---  | 8       |
| 88-75-5   | 2-Nitrophenol                     | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | ---        | ---     | ---  | ---  | ---     |
| 105-67-9  | 2,4-Dimethylphenol                | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 1600       | ---     | ---  | ---  | 9       |
| 111-91-1  | bis(2-Chloroethoxy) methane       | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | ---        | ---     | ---  | ---  | ---     |
| 120-83-2  | 2,4-Dichlorophenol                | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 230        | ---     | ---  | ---  | 1       |
| 120-82-1  | 1,2,4-Trichlorobenzene            | mg/kg     | --        | --        | --        | --        | --        | < 0.21  | < 0.2                | 780        | 3200    | 920  | ---  | 53      |
| 91-20-3   | Naphthalene                       | mg/kg     | --        | --        | --        | --        | --        | < 0.041   | < 0.039              | 1600       | 170     | 1.8  | 0.04 | 18      |

Table 1: Soil Analytical Results  
 Limited Site Investigation  
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| Sample Location/Identification |                             | TB-1                | TB-2      | TB-2-Dup  | TB-3      | TB-4      | TB-5      | TB-5-Dup  | Tier 1 Soil Remediation Objectives for Residential Properties |            |                      |            | Soil Component of the Groundwater Ingestion Route Values |
|--------------------------------|-----------------------------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|---|------------|----------------------|------------|--|
|                                |                             | Sample Depth (feet) | 23-25     | 13-15     | 13-15     | 23-25     | 28-30     | 15-17     |   |            |                      |            |  |
| Date Collected                 |                             | 8/20/2012           | 8/20/2012 | 8/20/2012 | 8/21/2012 | 8/21/2012 | 8/21/2012 | 8/21/2012 | Occupants   |            | Construction Workers | Background | Soil Component of the Groundwater Ingestion Route Values |
| Units                          |                             |                     |           |           |           |           |           |           | Ingestion   | Inhalation | Inhalation           | Chicago    |  |
| 106-47-8                       | 4-Chloroaniline             | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 310        | ---                  | ---        | 0.7  |
| 87-68-3                        | Hexachlorobutadiene         | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 16         | 1000                 | 180        | ---  |
| 59-50-7                        | 4-Chloro-3-methylphenol     | mg/kg               | --        | --        | --        | --        | --        | < 0.41    | < 0.39  | 5500       | ---                  | ---        | 120  |
| 91-57-6                        | 2-Methylnaphthalene         | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 310        | ---                  | ---        | 36   |
| 77-47-4                        | Hexachlorocyclopentadiene   | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 550        | 10                   | 1.1        | 2200   |
| 88-06-2                        | 2,4,6-Trichlorophenol       | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 58         | 200                  | ---        | 0.77   |
| 95-95-4                        | 2,4,5-Trichlorophenol       | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 7800       | ---                  | ---        | 1400   |
| 91-58-7                        | 2-Chloronaphthalene         | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 6300       | ---                  | ---        | 240  |
| 88-74-4                        | 2-Nitroaniline              | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 230        | 35                   | 3.6        | 0.14   |
| 131-11-3                       | Dimethylphthalate           | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 780000     | 1300                 | ---        | 380  |
| 208-96-8                       | Acenaphthylene              | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 2300       | ---                  | 0.03       | 420  |
| 606-20-2                       | 2,6-dinitrotoluene          | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 0.9        | ---                  | ---        | 0.0007   |
| 99-09-2                        | 3-Nitroaniline              | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 23         | 250                  | 26         | 0.01   |
| 83-32-9                        | Acenaphthene                | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 4700       | ---                  | 0.09       | 2900   |
| 51-28-5                        | 2,4-Dinitrophenol           | mg/kg               | --        | --        | --        | --        | --        | < 1       | < 0.97  | 160        | ---                  | ---        | 0.2  |
| 100-02-7                       | 4-Nitrophenol               | mg/kg               | --        | --        | --        | --        | --        | < 0.41    | < 0.39  | 630        | ---                  | ---        | ---  |
| 132-64-9                       | Dibenzofuran                | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 160        | ---                  | ---        | 30   |
| 121-14-2                       | 2,4-Dinitrotoluene          | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 0.9        | ---                  | ---        | 0.0008   |
| 84-66-2                        | Diethylphthalate            | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 63000      | 2000                 | ---        | 470  |
| 7005-72-3                      | 4-Chlorophenyl-phenyl ether | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | ---        | ---                  | ---        | ---  |
| 86-73-7                        | Fluorene                    | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 3100       | ---                  | 0.1        | 2800   |
| 100-01-6                       | 4-Nitroaniline              | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 230        | 1000                 | 110        | 0.1  |
| 534-52-1                       | 4,6-Dinitro-2-methylphenol  | mg/kg               | --        | --        | --        | --        | --        | < 0.41    | < 0.39  | 7.8        | ---                  | ---        | ---  |
| 86-30-6                        | N-nitrosodiphenylamine      | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 130        | ---                  | ---        | 5.6  |
| 101-55-3                       | 4-Bromophenyl-phenyl ether  | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | ---        | ---                  | ---        | ---  |
| 118-74-1                       | Hexachlorobenzene           | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 0.4        | 1                    | ---        | 11   |
| 87-86-5                        | Pentachlorophenol           | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 3          | ---                  | ---        | 0.14   |
| 85-01-8                        | Phenanthrene                | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 2300       | ---                  | ---        | 1.3  |
| 120-12-7                       | Anthracene                  | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 23000      | ---                  | 0.25       | 59000  |
| 86-74-8                        | Carbazole                   | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 32         | ---                  | ---        | 2.8  |
| 84-74-2                        | Di-n-butylphthalate         | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 7800       | 2300                 | ---        | 2300   |
| 206-44-0                       | Fluoranthene                | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 3100       | ---                  | 2.7        | 21000  |
| 129-00-0                       | Pyrene                      | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 2300       | ---                  | 1.9        | 21000  |
| 85-68-7                        | Butylbenzylphthalate        | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 16000      | 930                  | ---        | 930  |
| 91-94-1                        | 3,3'-Dichlorobenzidine      | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 1          | ---                  | ---        | 0.033  |
| 56-55-3                        | Benz(a)anthracene           | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 0.9        | ---                  | 1.1        | 8  |
| 218-01-9                       | Chrysene                    | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 88         | ---                  | 1.2        | 800  |
| 117-81-7                       | bis(2-Ethylhexyl)phthalate  | mg/kg               | --        | --        | --        | --        | --        | < 1       | < 0.97  | 46         | 31000                | ---        | 31000  |
| 117-84-0                       | Di-n-octylphthalate         | mg/kg               | --        | --        | --        | --        | --        | < 0.21    | < 0.2   | 1600       | 10000                | ---        | 10000  |
| 205-99-2                       | Benz(b)fluoranthene         | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 0.9        | ---                  | 1.5        | 25   |
| 207-08-9                       | Benz(k)fluoranthene         | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 9          | ---                  | 0.99       | 250  |
| 50-32-8                        | Benz(a)pyrene               | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 0.09       | ---                  | 1.3        | 82   |
| 193-39-5                       | Indeno(1,2,3-c,d)pyrene     | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 0.9        | ---                  | 0.86       | 69   |
| 53-70-3                        | Dibenzo(a,h)anthracene      | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 0.09       | ---                  | 0.2        | 7.6  |
| 191-24-2                       | Benz(g,h,i)perylene         | mg/kg               | --        | --        | --        | --        | --        | < 0.041   | < 0.039   | 2300       | ---                  | 0.68       | 130000   |

Table 2 - Terracon Soil Vapor Results

Proposed Kimbal Park

Chicago, Illinois

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| Sample Location/Identification                | SV-01                            | SV-02   | SV-03   | SV-04   | SV-04-DUP | SV-05   | SV-06   | Field Blank | Proposed Residential Soil Gas Remediation Objectives | EPA OSWER Screening Levels |               |         |
|---|----------------------------------|---------|---------|---------|-----------|---------|---------|-------------|--|----------------------------|---------------|---------|
|   | Sample Depth (feet)              |         |         |         |           |         |         |             |  |                            |               |         |
|   | Date Collected                   | 8/21/12 | 8/21/12 | 8/21/12 | 8/21/12   | 8/21/12 | 8/21/12 | 8/21/12     |  |                            |               |         |
| Units   |                                  |         |         |         |           |         |         |             | Diffusion and Advection                              |                            |               |         |
| <b>Volatile Organic Analytical Parameters</b> |                                  |         |         |         |           |         |         |             |  |                            |               |         |
| 71-55-6                                       | 1,1,1-Trichloroethane            | µg/m³   | < 1.9   | < 2     | < 2       | < 2.3   | < 2.3   | < 1.8       | < 2  | < 1.1                      | 6,600,000     | 220,000 |
| 79-34-5                                       | 1,1,2,2-Tetrachloroethane        | µg/m³   | < 2.4   | < 2.5   | < 2.5     | < 2.9   | < 2.9   | < 2.3       | < 2.5  | < 1.4                      | --            | 4.2     |
| 79-00-5                                       | 1,1,2-Trichloroethane            | µg/m³   | < 1.9   | < 2     | < 2       | < 2.3   | < 2.3   | < 1.8       | < 2  | < 1.1                      | 170,000       | 150     |
| 75-34-3                                       | 1,1-Dichloroethane               | µg/m³   | 1.4     | < 1.4   | < 1.4     | < 1.7   | < 1.7   | < 1.3       | < 1.4  | < 0.8                      | 690,000       | 5,000   |
| 75-35-4                                       | 1,1-Dichloroethene               | µg/m³   | 48      | < 1.4   | < 1.4     | 57      | 300     | < 1.5       | < 1.4  | < 0.8                      | 240,000       | 2,000   |
| 120-82-1                                      | 1,2,4-Trichlorobenzene           | µg/m³   | < 2.5   | < 2.7   | < 2.7     | < 3.1   | < 3.1   | < 2.5       | < 2.7  | < 1.5                      | 5,400         | 2,000   |
| 95-63-6                                       | 1,2,4-Trimethylbenzene           | µg/m³   | 4.4     | 3.5     | 3.3       | < 2.1   | < 2.1   | < 1.6       | < 1.8  | < 1                        | --            | 60      |
| 106-93-4                                      | 1,2-Dibromoethane                | µg/m³   | < 2.5   | < 2.7   | < 2.7     | < 3.1   | < 3.1   | < 2.5       | < 2.7  | < 1.5                      | 7.8           | 1.1     |
| 95-50-1                                       | 1,2-Dichlorobenzene              | µg/m³   | < 2     | < 2.2   | < 2.1     | < 2.5   | < 2.5   | < 2         | < 2.2  | < 1.2                      | 290,000       | 2,000   |
| 107-06-2                                      | 1,2-Dichloroethane               | µg/m³   | < 1.4   | < 1.4   | 4.8       | < 1.7   | 3.9     | < 1.3       | < 1.4  | < 0.8                      | 99            | 9.4     |
| 78-87-5                                       | 1,2-Dichloropropane              | µg/m³   | < 1.5   | < 1.6   | < 1.6     | < 1.9   | < 1.9   | < 1.5       | < 1.6  | < 0.9                      | 310           | 40      |
| 108-67-8                                      | 1,3,5-Trimethylbenzene           | µg/m³   | < 1.7   | < 1.8   | < 1.8     | < 2.1   | < 2.1   | < 1.6       | < 1.8  | < 1                        | --            | 60      |
| 106-99-0                                      | 1,3-Butadiene                    | µg/m³   | < 0.68  | 2       | 1.8       | < 0.83  | < 0.83  | < 0.66      | < 0.72   | < 0.4                      | --            | 0.87    |
| 541-73-1                                      | 1,3-Dichlorobenzene              | µg/m³   | < 2     | < 2.2   | < 2.2     | < 2.5   | < 2.5   | < 2         | < 2.2  | < 1.2                      | --            | 1,100   |
| 106-46-7                                      | 1,4-Dichlorobenzene              | µg/m³   | < 2     | < 2.2   | < 2.1     | < 2.5   | < 2.5   | < 2         | < 2.2  | < 1.2                      | 1,200,000     | 8,000   |
| 123-91-1                                      | 1,4-Dioxane                      | µg/m³   | < 3.1   | < 3.2   | < 3.2     | < 3.7   | < 3.7   | < 3         | < 3.2  | < 1.8                      | 220           | ---     |
| 67-64-1                                       | Acetone                          | µg/m³   | 63      | 80      | 110       | 25      | 48      | 40          | 39   | < 4.8                      | 750,000,000   | 3,500   |
| 71-43-2                                       | Benzene                          | µg/m³   | 3.6     | 3.2     | 2.4       | < 1.2   | 3.4     | 1.3         | < 1.1  | < 0.6                      | 370           | 31      |
| 100-44-7                                      | Benzyl chloride                  | µg/m³   | < 4.4   | < 4.7   | < 4.6     | < 5.4   | < 5.4   | < 4.3       | < 4.7  | < 2.6                      | --            | 5       |
| 75-27-4                                       | Bromodichloromethane             | µg/m³   | < 2.2   | < 2.3   | < 2.3     | < 2.7   | < 2.7   | < 2.1       | < 2.3  | < 1.3                      | 450,000,000   | 14      |
| 593-60-2                                      | Bromoethene(Vinyl Bromide)       | µg/m³   | NA      | NA      | NA        | NA      | NA      | NA          | NA   | NA                         | --            | ---     |
| 75-25-2                                       | Bromoform                        | µg/m³   | < 8.8   | < 9.4   | < 9.2     | < 11    | < 11    | < 8.5       | < 9.4  | < 5.2                      | 11,000        | 220     |
| 74-83-9                                       | Bromomethane                     | µg/m³   | < 3.2   | < 3.4   | < 3.4     | < 3.9   | < 4     | < 3.1       | < 3.4  | < 1.9                      | 6,900         | ---     |
| 75-15-0                                       | Carbon disulfide                 | µg/m³   | < 1.1   | 4.2     | 3.6       | < 1.3   | < 1.3   | 1.1         | < 1.1  | < 0.62                     | 780,000       | 7,000   |
| 56-23-5                                       | Carbon tetrachloride             | µg/m³   | < 2.2   | < 2.3   | < 2.3     | < 2.7   | < 2.7   | < 2.1       | < 2.3  | < 1.3                      | 210           | 16      |
| 108-90-7                                      | Chlorobenzene                    | µg/m³   | < 1.5   | < 1.6   | < 1.6     | < 1.9   | < 1.9   | < 1.5       | < 1.6  | < 0.9                      | 69,000        | 600     |
| 75-00-3                                       | Chloroethane                     | µg/m³   | < 0.85  | < 0.9   | < 0.89    | < 1     | < 1     | < 0.82      | < 0.9  | < 0.5                      | ---           | 100,000 |
| 67-66-3                                       | Chloroform                       | µg/m³   | 3.6     | < 1.8   | 2.2       | < 2.1   | < 2.1   | < 1.6       | < 1.8  | < 1                        | 110           | 11      |
| 74-87-3                                       | Chloromethane                    | µg/m³   | < 1.7   | < 1.8   | < 1.8     | < 2.1   | < 2.1   | < 1.6       | < 1.8  | < 1                        | --            | ---     |
| 156-59-2                                      | cis-1,2-Dichloroethene           | µg/m³   | 4700    | 20      | 10        | 25000   | 96000   | 590         | 64   | < 0.8                      | 1,100,000,000 | 350     |
| 10061-01-5                                    | cis-1,3-Dichloropropene          | µg/m³   | < 1.5   | < 1.6   | < 1.6     | < 1.9   | < 1.9   | < 1.5       | < 1.6  | < 0.9                      | --            | ---     |
| 110-82-7                                      | Cyclohexane                      | µg/m³   | 1.9     | < 1.3   | 1.4       | < 1.5   | 3.2     | < 1.2       | < 1.3  | < 0.7                      | --            | ---     |
| 124-48-1                                      | Dibromochloromethane             | µg/m³   | < 2.9   | < 3.1   | < 3       | < 3.5   | < 3.5   | < 2.8       | < 3.1  | < 1.7                      | 57,000,000    | 10      |
| 75-71-8                                       | Dichlorodifluoromethane          | µg/m³   | 2.4     | 2.2     | 2.2       | < 2.1   | < 2.1   | 2.1         | 2.3  | < 1                        | 270,000       | 2,000   |
| 100-41-4                                      | Ethylbenzene                     | µg/m³   | 3.5     | 3       | 2.1       | < 1.9   | < 1.9   | < 1.5       | < 1.6  | < 0.9                      | 1,300         | 220     |
| 87-68-3                                       | Hexachlorobutadiene              | µg/m³   | < 3.6   | < 3.8   | < 3.7     | < 4.4   | < 4.4   | < 3.5       | < 3.8  | < 2.1                      | ---           | 11      |
| 591-78-6                                      | Methyl Butyl Ketone (2-Hexanone) | µg/m³   | < 7     | < 7.4   | < 7.3     | < 8.5   | < 8.5   | < 6.7       | < 7.4  | < 4.1                      | ---           | --      |
| 78-93-3                                       | Methyl Ethyl Ketone (2-Butanone) | µg/m³   | 10      | 7       | 13        | < 3.1   | 3       | 3.2         | < 2.7  | < 1.5                      | 6,400,000     | 10,000  |
| 1634-04-4                                     | Methyl tert-butyl ether          | µg/m³   | < 1.2   | < 1.3   | < 1.2     | < 1.5   | < 1.5   | < 1.2       | < 1.3  | < 0.7                      | 3,700,000     | 30,000  |
| 75-09-2                                       | Methylene Chloride               | µg/m³   | < 12    | < 12    | < 12      | < 14    | < 14    | < 11        | < 12   | < 6.9                      | 5,600         | 520     |
| 100-42-5                                      | Styrene                          | µg/m³   | < 1.5   | < 1.6   | < 1.6     | < 1.9   | < 1.9   | < 1.5       | < 1.6  | < 0.9                      | 1,400,000     | 10,000  |
| 127-18-4                                      | Tetrachloroethene (PCE)          | µg/m³   | 70      | 4.4     | < 2.5     | < 2.9   | 3.1     | < 2.3       | < 2.5  | < 1.4                      | 550           | 81      |
| 109-99-9                                      | Tetrahydrofuran                  | µg/m³   | < 2.5   | < 2.7   | < 2.7     | < 3.1   | < 3.1   | < 2.5       | < 2.7  | < 1.5                      | --            | ---     |
| 108-88-3                                      | Toluene                          | µg/m³   | 16      | 17      | 12        | 4.1     | 10      | 5.3         | 1.6  | < 0.8                      | 6,200,000     | 4,000   |
| 156-60-5                                      | trans-1,2-Dichloroethene         | µg/m³   | 180     | 3.7     | < 1.4     | 250     | 1100    | 8.9         | < 1.4  | < 0.8                      | 85,000        | 700     |
| 10061-02-6                                    | trans-1,3-Dichloropropene        | µg/m³   | < 1.5   | < 1.6   | < 1.6     | < 1.9   | < 1.9   | < 1.5       | < 1.6  | < 0.9                      | --            | ---     |
| 79-01-6                                       | Trichloroethene (TCE)            | µg/m³   | 17000   | 32      | 30        | 4900    | 17000   | 30          | 4.2  | < 1.1                      | 1,500         | 2.2     |
| 75-01-4                                       | Vinyl chloride                   | µg/m³   | 13      | < 0.9   | 2.1       | 1600    | 7900    | 23          | 2.3  | < 0.5                      | 290           | 28      |
| 1330-20-7                                     | Xylene (total)                   | µg/m³   | 16      | 13      | 9.6       | < 5.4   | 5.3     | < 4.3       | < 4.7  | < 2.6                      | 140,000       | ---     |

Table 3: Groundwater Analytical Results

## Limited Site Investigation

Proposed Kimbal Park

Chicago, IL

A2107017 Task 7A

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## **Table Notes**

Remediation Objectives from 35 Illinois Administrative Code Chapter 742: *Tiered Approach to Corrective Action Objectives* (TACO).

Remediation Objectives for Non-TACO compounds from Illinois Environmental Protection Agency's (IEPA's) web site (<http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html>).

mg/L = milligrams per liter, generally equivalent to parts per million (ppm)

mg/kg = milligrams per kilogram, generally equivalent to ppm

µg/m<sup>3</sup> = micrograms per cubic meter

TCLP = Toxicity Characteristic Leaching Procedure

SPLP = Synthetic Precipitation Leaching Procedure